

Exhibit B

Patient Account: 20005972-517
Med. Rec. No.: (0150)390315R
Patient Name: SHRIVER, JAMES
Age: 47 YRS DOB: 01/28/60 Sex: M Race: C
Admitting Dr.: ARONSON MD, JUDITH F
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/08/07 1555
Copies to:

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University of Texas Medical Branch
Galveston, Texas 77555-0543
(409) 772-1238
Fax (409) 772-5683
Pathology Report

390315

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-07-00212

AUTOPSY INFORMATION:

Occupation: Inmate Birthplace: Unknown Residence: TDCJ Huntsville, TX
Date/Time of Death: 08-08-07/0512 Date/Time of Autopsy: 08-09-07/1030
Pathologist/Resident: Cowan/Haley Service: OTDCJ
Restriction: NONE-Return organs

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole: History of psychiatric illness and sudden, unexpected death.

- A. Skin, anterior forearms and lower legs; Multiple well-healed transverse scars
- B. Heart: Cardiomegaly (410 grams)
Patent foramen ovale
- C. Lungs: Congestion (combined weight 1320 g)
Interstitial fibrosis, mild

II. Other findings:

- A. Kidney, right, duplicate renal arteries
Prominent fetal lobulations and cortical scars
- B. Urinary bladder: mild muscular hypertrophy

C1

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
3-contributory COD; 4-concomitant, significant; 5-incidental ***

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CLINICAL SUMMARY:

The following history is obtained from TDCJ records.

Past Medical History/Clinical course

This was a 47-year-old TDC inmate with a history of schizoaffective disorder and borderline personality disorder, hepatitis C infection, hypertension, and asthma who was serving a 25-year sentence for burglary and indecency with a child. He had recently presented to clinic on 6/13/2007 with complaints of breathing difficulty; no findings were present on exam, and he was discharged without treatment. Cardiogram performed 05/21/04 was reported abnormal, with a normal sinus rhythm, but a nonspecific ST abnormality.

In addition, he had a long history of treatment for psychiatric symptoms and had made serious suicide attempts in the past. On 8/1/07, he was transferred from the Robertson Unit to Skyview Crisis Management unit for threats of self-harm, banging his head, and auditory hallucinations. He was returned to the Byrd facility on 8/7/07 and at that time reported that he was receiving all medications and denied suicidal ideation. However, on August 8, 2007 at 0445, he was found unresponsive and asystolic in the bunk bed of his two-man cell. He was taken to the infirmary where CPR attempts were unsuccessful, and he was pronounced dead at 0512.

Past Medical history:

Schizoaffective disorder

Borderline personality disorder

Hepatitis C virus - Last ALT 22 (6/13/07)

Hypertension

Asthma

Medications:

HCTZ 50mg daily

Aspirin 325mg daily

Dicyclomine 20mg BID

Ziprasidone 80mg BID

Fluoxetine 20mg QAM

Haloperidol 15mg BID

Bentropine 1mg daily

SH /SH

09/11/07

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EXTERNAL EXAMINATION: The decedent is a well nourished, appropriately developed white male, measuring 182 cm in length, identified as James SHRIVER by band on the right ankle. The body is not clothed and there are no accompanying personal belongings. Rigor mortis is present in the arms and legs and there is fixed dependent lividity on the posterior surfaces. The head is normocephalic with short dark blonde scalp hair. The irides are blue with equal pupils measuring 0.5 cm in diameter. The corneas are cloudy, conjunctivae are pink, and the sclerae are white. The nares are patent without exudate. Dentition is fair. Buccal membranes are normal without lesions.

The trachea is midline. Palpation of the neck reveals no lymphadenopathy, thyromegaly or evidence of trauma. There is normal male hair distribution. The chest diameters are normally proportioned. The abdomen is flat. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable. The back and the extremities are unremarkable. The genitalia are those of a normal circumcised male.

The following tattoos are present: 3 tattoos over the right anterior lower extremity: a skull, a grim reaper, and "JAMIE"; on the right deltoid: a cross with "SUKI AND JAMIE" and the patient's initials; on the right chest: "SCORPIO" and "SUKI"; a scorpion on the right neck and lettering on the left neck. There are 2 tattoos over the left chest: a devil and a cat; multiple tattoos on the left arm featuring symbols, animal shapes, and lettering. There are 4 tattoos over the anterior left lower extremity: a pair of dice, 2 skulls, and "FJW"; a tattoo over the right back with lettering; 2 tattoos over the posterior right arm: "TEXAS" and a peacock; on the right dorsal hand, "LBJ".

The following identifying marks are present: 2 scars over the anterior right thigh, one measuring 5 x 0.4 cm and another measuring 7 x 1.4 cm.; 5 scars over the anterior right foreleg, the largest measuring 17 x 0.6.; 2 scars over the anterior left thigh, one measuring 1.4 x 0.8 and another measuring 1.3 x 0.3 cm.; an area of 7 scars over the anterior left foreleg the longest measuring 18.5 x 0.1 cm, and an area of 6 scars over the left ankle the largest measuring 7 x 0.1 cm. There are multiple shallow scars over the right forearm, 13 oriented horizontally and 6 oriented vertically, the largest measures 17.4 x 0.4 cm.; 2 scars on the right chest, measuring 6.8 x 0.2 cm and 6.2 x 0.2 cm.; a vertical scar over the left chest measuring 15 x 0.2 cm.; a deep scar on the left forehead measuring 17.5 x 0.2 cm. There are multiple shallow scars over the left anterior forearm, 7 oriented horizontally and 11 oriented vertically; 3 shallow scars over the right dorsal hand, the largest measuring 5.2 x 0.2 cm.

There is a cut over the right forehead measuring 0.1 x 0.1 cm surrounded by

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Attending Dr.: OUTSIDE TDCJ

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GROSS DESCRIPTION:

erythema; a puncture over the right dorsal hand measuring 0.2 x 0.2 cm.; a bruise over the right anterior leg measuring 2.1 x 0.6 cm, and a bruise over the left knee measuring 5.8 x 4.3 cm.

The following evidence of medical intervention is present: an identification band present on the right ankle with the patient's name; 2 AED probes over the right chest and left flank.

INTERNAL EXAMINATION: The body is opened using a standard Y - shaped incision to reveal a 5.5 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. There is no pleural fluid. The lungs are normally inflated. There are no pleural adhesions. The pericardial sac contains 25 mL of clear fluid. There are no fractured ribs. The thymus is not identified. No thromboemboli are found within the large pulmonary arteries. The abdominal cavity contains no fluid. There are no adhesions between loops of bowel.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 410 g. (normal 270-360 g.) and is of normal shape. The pericardium is smooth and translucent. The myocardium is homogenous red-brown without infiltrates or lesions. The endocardium is translucent and smooth. The left ventricular wall is 1.1 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm), 2.0 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous. Valve circumferences measured on the fresh heart are: tricuspid valve 11.8 cm (normal 12-13 cm), pulmonic valve 8.2 cm (normal 8.5-9.0 cm), mitral valve 11.1 cm (normal 10.5-11.0 cm), and aortic valve 7.2 cm (normal 7.7-8.0 cm). The foramen ovale is patent.

Blood vessels: The coronary circulation is right dominant. The coronary arteries reveal no atherosclerotic plaques. The aorta exhibits minimal atherosclerotic changes. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior vena cavae and their branches are normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is tan-brown, smooth without lesions, and the vocal cords are unremarkable. The tracheal mucosa is tan-brown, smooth without lesions.

Lungs, bilateral: The right lung weighs 670 g. and the left lung weighs 650 g. (normal Rt 435 g. - Lt. 385 g.). The pleural surfaces show decreased septal spaces and lobules with out-pouchings suggestive of interstitial fibrosis. Lividity is dorsal. The left lung is inflated with formalin, and the right lung is examined fresh before sectioning. The bronchial and vascular trees are normal. The hilar nodes are unremarkable. The lung parenchyma is

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red-purple with appropriate porosity.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is tan-red and smooth without lesions.

Tongue: The tongue shows a finely granular surface with no coating.

Stomach and duodenum: The stomach contains 20 ml of partially digested food. The mucosa is normally rugose, tan and smooth with no lesions. The duodenum has a tan, glistening mucosa with a normal plical pattern without lesions. The duodenal mucosa is neither congested or hemorrhagic.

Pancreas: The pancreas has a normal conformation. It is tan-yellow, lobulated and normally firm. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains 10 mL bile and no stones. The mucosa is gray-brown and smooth. The cystic duct, hepatic duct and common bile duct are patent and bile is expressed freely.

Liver: The liver weighs 990 g. (normal 1400-1900 g.). Glisson's capsule is translucent. The cut surfaces have a homogenous lobular pattern. The surfaces are red-brown, smooth and firm and display normal architecture.

Small bowel: The serosa is smooth and translucent without adhesions. The bowel is neither dilated or constricted. The lumen contains a small amount of soft brown feces. The mucosa is tan and glistening with normal plications. The bowel wall reveals no gross lesions.

Large bowel: The serosa is smooth and translucent without adhesions. The lumen contains a small amount of soft formed stool. The mucosa is tan and glistening without lesions. There are no diverticula or polyps. The appendix is grossly normal.

Rectum and anus: No lesions are noted and no abnormalities of the anal opening are present.

RETICULOENDOTHELIAL SYSTEM: Spleen: The spleen weighs 131 g. (normal 125-195 g.) and the capsule is gray-blue, translucent, wrinkled, and without capsular fibrosis or infarcts. The spleen is semi-liquid. The parenchyma is red-brown, granular with adequate white pulp.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

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GENITOURINARY SYSTEM: Kidneys: The right kidney weighs 137 g. and the left 142 g. (normal 125-170 g.). The capsules strip with ease to reveal pink-brown, smooth cortical surfaces with fetal lobulations, and occasional tiny pits. The cut surfaces show well demarcated cortico-medullary junctions. The renal pelvic mucosa is tan-yellow and smooth without lesions. Perihilar adipose tissue is appropriate.

Ureters: The ureters are unobstructed.

Bladder: The bladder is dilated and contains 65 mL of cloudy yellow urine. The mucosa is tan-gray, smooth and the bladder wall is markedly trabeculated. The trigone has a normal conformation.

Prostate: The prostate is tan-gray, firm and smooth. The cut surfaces reveal normal granular surfaces without distinct architecture. The seminal vesicles are unremarkable.

Testes: The right testis weighs 18.1g. and the left 10.9 g. (normal 20-25 gm). The tunica albuginea is tan-white and glistening. The cut surfaces reveal soft, tan-yellow parenchyma with tubules which string with ease.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 9.7 g. (normal 10-22 g.) and is red-brown, bosselated and glistening. The cut surfaces are homogeneous, translucent and red-brown.

Parathyroids: One golden-brown, soft fragment of tissue is collected as possible parathyroid.

Adrenals: The right adrenal weighs 7.2 g. and the left 9.7 g. (normal 5-6 g.). The adrenals have a normal conformation and position. Cut surfaces reveal firm golden yellow-brown cortices with gray soft medullae.

CENTRAL NERVOUS SYSTEM: BRAIN: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1620 g. (normal 1200-1400 g.). The gyri and sulci display a normal pattern without edema or atrophy. The leptomeninges are unremarkable. The circle of Willis, basilar, and vertebral arteries show no atherosclerosis. No indentation or herniation of the cingulate gyri, unci, or molding of the cerebellar tonsils is noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for

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GROSS DESCRIPTION:

subsequent examination by a neuropathologist.

During the autopsy blood samples were submitted for toxicology and vitreous samples were retained for potential further examination. Samples of liver, kidney, heart, lung and spleen were frozen for potential further examination.

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08/10/07

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MICROSCOPIC DESCRIPTION:

Heart, right and left ventricle, Slides 10, 15, 16, and 17, (4 H&E, 3 PAS): There is diffuse mild edema. Throughout the myocardium, there are scattered wavy fibers, contraction bands, and minimal-to-moderate fibrosis. The veins are distended, and the small arteries demonstrate hyalinization, thickened intima, and obscured internal elastic lamina. Also noted is basophilic degeneration of myocytes, which stains on PAS.

Lungs, left, Slides 11 and 12, (2 H&E):

The bronchial architecture is preserved. The alveolar septa are congested with dilated capillaries and show scattered areas of scant alveolar hemorrhage. No inflammation or thrombi are noted.

Lungs, right, Slides 13 and 14, (3 H&E):

The bronchial architecture is preserved. The alveolar septa are congested with dilated capillaries and show focal patchy areas of alveolar hemorrhage. No inflammation or thrombi are noted.

Kidney, bilateral, Slides 4 and 6, (2 H&E):

The right kidney demonstrates congestion and significant hemorrhage, whereas the left kidney shows autolysis but no pathologic change.

Liver, Slide 1, (1 H&E):

There is prominent autolysis, with loss of architecture.

Spleen, Slide 3, (1 H&E):

The spleen has a normal architecture with diffuse autolysis.

Pancreas, Slide 2, (1 H&E):

There is diffuse autolysis and increased fat but otherwise no pathologic change.

Adrenal Gland, Slides 1 and 5, (2 H&E):

The left adrenal is fragmented, and both are autolyzed and demonstrate no pathologic change.

Thyroid, Slide 2, (1 H&E):

The follicles are variable in size and demonstrate no pathologic change. No inflammation is noted.

Parathyroid, Slide 4, (1 H&E):

One parathyroid demonstrates fatty content without pathologic change.

Testes, Slides 3 and 5, (2 H&E):

The left testis demonstrates "ghost outlines" but no frank infarct, with preservation of tissue around the rete and hilum. Active spermatogenesis

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MICROSCOPIC DESCRIPTION:

noted bilaterally.

Prostate, Slide 6, (1 H&E):

The prostate has preserved architecture without pathologic change.

Urinary bladder, Slide 9, (1 H&E):
No pathologic change.

Esophagus and Stomach, Slide 8, (1 H&E):
No squamous epithelium is identified. No pathologic change noted.

Ileum and Jejunum, Slide 7, (1 H&E):
Sloughing of mucosal layer noted. Otherwise no pathologic change.

Rectum, Slide 9, (1 H&E):
Sloughing of mucosal layer noted. Otherwise no pathologic change.

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09/14/07

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Pathology Report

FINAL AUTOPSY REPORT

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Autopsy No.: AU-07-00212

CLINICOPATHOLOGIC CORRELATION:

The decedent was a 47-year-old TDC inmate with a history of schizoaffective and borderline personality disorders, hepatitis C virus, hypertension, and asthma. He had most recently presented to clinic on 6/13/2007 with complaints of breathing difficulty; no findings were present on exam, and he was discharged without treatment. In addition, he had a long history of treatment for psychiatric symptoms, had made serious suicide attempts in the past, and had just recently been discharged from Skyview Crisis Management unit for threats of self-harm and hallucination. At time of death, he reported regularly taking all prescribed medications: Ziprasidone 80mg BID, Fluoxetine 20mg QAM, Haloperidol 15mg BID, Benztropine 1mg daily, Dicyclomine 20mg BID, HCTZ 50mg daily, and aspirin 325mg daily. On August 8, 2007 at 0445, he was found unresponsive in the bunk bed of his two-man cell. The patient was taken to the infirmary where CPR attempts were unsuccessful, and he was pronounced dead at 0512.

Though there is no information regarding core body temperature at time of death or the exact ambient temperature of his unit, there is cause to suspect hyperthermia. Heat elimination by radiation ceases when the ambient temperature rises above body temperature, and the patient had been placed in a unit without air-conditioning in the summer heat and humidity. More compelling are his prescribed medications, many of which are known to cause temperature dysregulation, permitting hyperthermia. In addition to causing drug induced syndromes like neuroleptic malignant and serotonin syndromes, antipsychotic and antidepressant medications impair heat tolerance, perhaps by medications indicated in the development of hyperthermia include anticholinergic agents such as Benztropine, Dicyclomine, and antihistamines that impair the sweating mechanism. Sympathomimetic drugs such as cocaine and amphetamines can increase body temperature, and diuretics may cause volume depletion and limit the ability to sweat and adjust cardiac output.

A significant number of heat-related deaths do not directly result from hyperthermia but from stress fatally exacerbating underlying medical disease. Though his coronary arteries were patent without noticeable atherosclerosis, his heart was heavy at 410 gm with evidence of ischemic change on microscopy. EKG in 2004 reported a nonspecific ST abnormality. All heart sections demonstrated mild edema, scattered wavy fibers and contraction banding, and minimal-to-moderate fibrosis. The myocardial veins were distended, and the small arteries demonstrated hyalinization, thickened intima, and obscured internal elastic lamina. Even with these relatively unimpressive findings, the added stress of heat could compound the potential for dysrhythmia, heart failure, seizure, or shock. In many heat-related deaths, findings are non-specific, and diagnosis is based on scene investigation and circumstances surrounding death.

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CLINICOPATHOLOGIC CORRELATION:

These patients are often dehydrated, a condition that can be detected by vitreous fluid electrolytes and urea nitrogen analysis. However, careful analysis is needed as post-mortem levels in vitreous fluid demonstrate a gradual decline in sodium and chloride and a linear increase in potassium. Expected concentrations are: sodium 140-145 mEq/L, chloride 115-125 mEq/L, and urea nitrogen 10-15 mg/dL. Elevated sodium > 150-165 mEq/L, chloride > 125-140 mEq/L, and urea nitrogen > 40-60 mg/dL are considered indicative of dehydration. This patient's vitreous revealed sodium 124 mEq/L and chloride not measured. His carbon dioxide content was 12.7 mEq/L, a value that is within expected range and remains stable during the post-mortem interval. Potassium exits the cells rapidly after death and is reflected as a gradual, linear rise in vitreous; this rise is most impressively influenced by ambient temperature during the postmortem interval. The patient's potassium concentration was 10.7 mEq/L, a value lower than expected. In conjunction with his lower sodium value, this may indicate a "low-salt" or "hypotonic" pattern of electrolyte abnormality, most often a result of fatty metamorphosis or cirrhosis of the liver. Indeed, this patient was hepatitis C seropositive.

In summary, prior abnormal EKG and the signs of ischemia in the myocardium, with small vessel abnormalities, suggest arrhythmia as a cause of death. The medication history and otherwise vague anatomic findings point to hyperthermia as a contributing factor in this patient's death. It is our opinion that the cause of death is cardiac arrhythmia, with likely temperature dysregulation, and the manner of death is natural.

References:

Dolinak, D, Matsches EW, and Lew, EO. Forensic pathology: principles and practice. Burlington (MA): Elsevier; 2005.

Coe, JI. Postmortem chemistry update: Emphasis on forensic application. American Journal of Medical Pathology, 14:2. 1993.

SH /SH
09/14/07

DANIEL F. COWAN, M.D., PATHOLOGIST
DANIEL F. COWAN, M.D., PATHOLOGIST
09/18/07

(Electronic Signature)

Patient Name: SHRIVER, JAMES
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END OF REPORT

Exhibit C

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1443175
 Patient Name: ROBLES, DIONICIO
 Age: 54 YRS DOB: 03/30/53 Sex: M Race: S
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/13/07 1337
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144 3175

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-07-00224

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/13/2007 05:00 Date/Time of Autopsy: 8/14/2007
 Pathologist/Resident: ARONSON/HALEY Service: OUTSIDE TDCJ
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole: History of sudden, unexpected death	C1
A. Body as a whole: Psychosis, treated with thorazine and celexa	C2
B. Body as a whole: Advanced autolysis	A4
C. Lungs, bilateral: Congestion and edema (combined weight 1640 gm)	A4
D. Brain, left cerebral convexity: Mild subarachnoid hemorrhagic discoloration	A4
E. Blood: Post-mortem toxicology negative for drugs of abuse	A4
II. Heart, myocardium: Cardiomegaly, mild (weight 440 gm)	A3
A. Heart, right ventricle: Dilatation	A3
III. Other findings:	
A. Liver: Steatosis and fibrosis	A5
B. Skin: Dermatophytosis	A5
C. Thyroid: Chronic lymphocytic thyroiditis	A5
D. Skull: Hyperostosis frontalis interna, and focal non-specific defect in posterior skull	A5
E. Kidney, left: Duplicate renal artery	A5
F. Gallbladder: Cholesterolosis	A5
G. Urinary bladder: Mild trabeculations	A5
H. Urinary bladder: Mucosal hematoma (4 x 3.3 cm)	A5

CAUSE OF DEATH: Heat related death due to environmental factors and phenothiazines

MANNER OF DEATH: Accident

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: ROBLES, DIONICIO
 Patient Location: AUTOPSY
 Room/Bed: .
 Printed Date / Time: 10/18/07 - 0821

Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)1443175

Patient Name: ROBLES, DIONICIO

Age: 54 YRS DOB: 03/30/53 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/13/07 1337

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(409) 772-1238

Fax (409) 772-5683

Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-07-00224

CLINICAL SUMMARY:

The following information is based on information provided by the TDC system, OIG, and Judge Duncan.

The patient was a 54-year-old TDC inmate with a past medical history of mood and anxiety disorders who was prescribed Cymbalta and Abilify in 1996. These medications were continued following his placement in county prison on 7/17/07. About one week prior to death, he began to experience auditory hallucinations and was prescribed Celexa and Thorazine. For several days following, he repeatedly complained of feeling hot and was placed in air-conditioned rooms and in front of a fan with little improvement. On 8/13/07 at approximately 0500, he was found by an officer face-down on the top bunk of his cell after he did not present for breakfast. He was taken to the Byrd Unit emergency room and was pronounced dead at 0525. Temperature log from Aug 12 reported a maximum outdoor temperature of 110 degree F on that day.

SH /SH
09/14/07

Patient Name: ROBLES, DIONICIO

Patient Location: AUTOPSY

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Med. Rec. No.: (0150)1443175

Patient Name: ROBLES, DIONICIO

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Autopsy No.: AU-07-00224

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The body is that of a 53 year old, obese, and appropriately developed Hispanic male, measuring 175 cm in length. The body is unclothed. No personal belongings accompany the body. There is rigor mortis present in the upper and lower extremities and the face and there is fixed dependent lividity on the posterior surfaces. The head is normocephalic with short gray-black scalp hair and mustache and beard stubble. The irides are brown with equal pupils measuring 0.5 cm in diameter. The corneas are cloudy, conjunctivae are pink and the sclerae are white with petechial hemorrhage more noticeable in the right eye. The nares are patent with mucus exudate. Dentition is unremarkable. The patient has his tongue clamped firmly between his teeth. Buccal membranes are normal with drying of the lips. The neck does not reveal any evidence of external trauma. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly. There is normal male hair distribution. The chest does not have increased anterior-posterior diameter. The abdomen is protuberant. Lymph node enlargement is not present in the supraclavicular, axillary or inguinal regions. The extremities and back are unremarkable. The genitalia are those of a normal uncircumcised male.

The following evidence of medical intervention is present: There are 4 electrocardiograph electrodes, one over the right shoulder, one over the left shoulder, one over the left lower quadrant, and one over the right lower quadrant.

There is a scar over the right lateral thigh measuring 24.6 x 0.8 cm. There is an abrasion over the right knee measuring 0.2 x 0.5 cm and an abrasion over the right ankle measuring 0.6 x 0.6 cm. There is a scab over the right anterior foreleg measuring 0.3 x 2.1 cm. Over the right medial ankle, there is a scab measuring 2.5 x 1.4 cm and an area of scattered scabs measuring 2.1 x 0.4 cm. There are three scars over the left anterior knee measuring 0.4 x 0.4 cm, 0.1 x 0.5 cm, and 1.2 x 0.2 cm. There is an area of scab over the left anterior foreleg measuring 2.1 x 2.5 cm. There is an open abrasion over the right lateral upper arm measuring 1.0 x 0.8 cm.

There is a nevus over the mid-back measuring 1.6 x 1.4 cm. There are discolored toenails on the left great toe and right second toe. There are multiple inflamed hair follicles, some with a central pustule, over the shoulders, chest, and axilla, measuring 0.1 to 0.6 cm in diameter.

INTERNAL EXAMINATION: The body is opened using a standard Y - shaped incision and reveals a 2.4 cm thick panniculus. The thoracic and abdominal organs are in the normal anatomic positions. There is minimal pleural fluid. The lungs are appropriately inflated. There are fibrous pleural adhesions on the right to the posterior chest wall. The pericardial sac contains no fluid. There are no fractured ribs. The thymus is not identified. No thromboemboli are found

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Continued....

Patient Account: 20005972-517
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Patient Name: ROBLES, DIONICIO
Age: 54 YRS DOB: 03/30/53 Sex: M Race: S
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/13/07 1337
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-07-00224

GROSS DESCRIPTION:

within the large pulmonary arteries. The abdominal cavity contains minimal fluid. There are few adhesions between loops of bowel. The entire body demonstrates an advanced degree of autolysis.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 440 g. (normal 270-360g.) and is of normal shape and size. The pericardium is smooth and transparent. The myocardium is autolyzed and is homogeneous brown-black. No scars, infiltrates, or lesions are appreciated. The endocardium is dark red and smooth. Serial cuts from the apex reveals right ventricular dilatation. The left ventricular wall is 1 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm), 2.0 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are red-brown, delicate and membranous. Valve circumferences measured on the fresh heart are: tricuspid valve 15.1 cm (normal 12-13 cm), pulmonic valve 8.1 cm (normal 8.5-9.0 cm), mitral valve 14.2 cm (normal 10.5-11.0 cm), and aortic valve 7.8 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant. The coronary arteries reveal mild to moderate atherosclerotic plaques. The left anterior descending coronary artery shows diffuse involvement of an eccentric plaque with 30 to 40% stenosis, the left circumflex artery shows diffuse circumferential thickening with 10-20% stenosis, and the posterior descending artery shows diffuse circumferential thickening with a focal area of eccentric plaque with 35-40% stenosis, located 9 cm from the origin of the right coronary artery for a distance of 0.5 cm. There is no evidence of hemorrhage or rupture within the plaques. The aorta exhibits minimal atherosclerotic changes without ulceration or friable calcification. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior vena cavae and their branches are normal in configuration without external compression and are not distended with blood.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is red-brown, smooth, without lesions, and the vocal cords are unremarkable. The tracheal mucosa is red-brown, smooth, and without lesions.

Lungs, bilateral: The right lung weighs 820 g., and the left lung weighs 820 g. (normal R-435/L-385 g.). The pleural surfaces are red-brown and smooth. Lividity is dorsal. The left lung is inflated with formalin, and the right lung is examined fresh before sectioning. Hilar dissection reveals the bronchial and vascular trees to be of normal configuration without lesions. The hilar nodes are unremarkable. The lung parenchyma is red-brown with normal porosity.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is tan-brown and

Patient Name: ROBLES, DIONICIO
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Continued....

Patient Account: 20005972-517
Med. Rec. No.: (0150)1443175
Patient Name: ROBLES, DIONICIO
Age: 54 YRS DOB: 03/30/53 Sex: M Race: S
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
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Autopsy No.: AU-07-00224

GROSS DESCRIPTION:

smooth without lesions. The esophagus is firmly anchored to the diaphragm.

Tongue: The tongue reveals soft tissue hemorrhage of the apex.

Stomach and duodenum: The stomach contains 15 ml of light brown, liquid chyme. The wall displays flattened rugae, and the mucosa is tan-gray without lesions. The duodenum has a tan, glistening mucosa with a normal plical pattern without lesions. The duodenal mucosa is focal hemorrhage.

Pancreas: The pancreas has a normal conformation of the head and tail. It is tan-yellow, lobulated and firm. The pancreatic duct is patent. The pancreas cuts without a gritty sensation.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains 10 mL of bile and no stones. The mucosa is gray-yellow and granular with cholesterolosis. The cystic duct, hepatic duct and common bile duct are patent and bile is expressed freely.

Liver: The liver weighs 1720 g. (normal 1400-1900 g.). Glisson's capsule is translucent and glistening. The cut surfaces have a homogenous lobular pattern, cut with ease and ooze blood. The surfaces are brown-orange, soft, with multiple spaces created by gas bubbles. Otherwise, the architecture is normal.

Small bowel: The serosa is smooth and translucent with minimal adhesions. The bowel is neither dilated or constricted and the lumen contains light brown liquid stool. The mucosa is tan and glistening with normal plications and focal areas of hemorrhage. The bowel wall reveals no gross lesions.

Large bowel: The serosa is smooth and translucent with minimal adhesions. The lumen contains light brown formed stool. The mucosa is tan and glistening and shows focal congestion. There are no diverticula or polyps present within the large bowel. The appendix is grossly normal.

Rectum and anus: No lesions are noted and no abnormalities of the anal opening are present.

RETICULOENDOTHELIAL SYSTEM: Spleen: The spleen weighs 318 g. (normal 125-195 g.) and the capsule is gray-blue, translucent, and smooth without capsular fibrosis or infarcts. The spleen is semi-liquid, and the cut surfaces ooze blood. The parenchyma is red-brown, soft, and bloody with adequate white pulp. Granulomas are not present.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable. The cut surfaces show normal architecture.

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GROSS DESCRIPTION:

GENITOURINARY SYSTEM: Kidneys: The right kidney weighs 160 g., and the left 160 g. (normal 125-175 g.). The capsules strip with ease to reveal brown, finely granular cortical surfaces with multiple scattered U-shaped pits. The cut surfaces show poorly demarcated cortico-medullary junctions. The cortex is 0.7 cm in thickness; the medulla is 1.6 cm in thickness. The renal pelvic mucosa is tan-white, smooth and has no lesions. Perihilar adipose tissue is appropriate. The left renal artery splits into three segments before entering the kidney.

Ureters: The ureters are unobstructed and measure 0.3 cm in maximal external diameter in the upper third, with tan, smooth, glistening mucosa. No periureteral fibrosis is noted. The distal ureters are probe-patent into the bladder.

Bladder: The bladder is not dilated or contracted and contains a small amount of cloudy yellow urine. The mucosa is gray-white and smooth, and the bladder wall is mildly trabeculated. There is a hematoma near the urethral opening measuring 4.0 x 3.3 cm. A post-trigonal pouch is present. The trigone has a normal conformation.

Prostate: The prostate is tan-gray, smooth and firm. The cut surfaces reveal normal granular surfaces without distinct architecture. The seminal vesicles are unremarkable.

Testes: The right testis weighs 35 g., and the left 26 g. (normal 20-25 g.). The tunica albuginea is tan-white and glistening. The cut surfaces reveal soft, tan-yellow parenchyma with tubules which string with ease.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 31 g. (normal 10-22 g.) and is red-brown, bosselated and glistening. The cut surfaces are soft, homogeneous, translucent and red-brown without lesions, cysts or nodules.

Parathyroids: There are 4 golden-brown, soft fragments of tissue identified as possible parathyroids.

Adrenals: The right adrenal weighs 8.8 g with fat attached, and the left 11 g with fat attached (normal 5-6 g.). The adrenals have a normal conformation and position. Cut surfaces reveal soft, fragmented, red-brown adrenals with little distinction between the cortices and medullae.

CENTRAL NERVOUS SYSTEM: BRAIN: Reflection of the scalp reveals no subgaleal hemorrhage. The calvarium and base of the skull show no fracture. There is a smooth, oval posterior skull defect measuring 1.3 x 1.9 cm that extends to a depth of 0.7 cm without surrounding fracture or vital reaction. There are

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Continued....

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GROSS DESCRIPTION:

calcified nodules of the frontal skull consistent with hyperostosis frontalis. There is subdural discoloration of the left cerebral fissure. The dura mater is normal. The brain weighs 1530 g. (normal 1200-1400 g.). The gyri and sulci display a normal pattern without edema or atrophy. The leptomeninges are unremarkable. The circle of Willis, basilar, and vertebral arteries show no atherosclerosis. No indentation or herniation of the cingulate gyri, unci, or molding of the cerebellar tonsils is noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The spinal cord is removed, and gross examination reveals no lesions. The spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The pituitary gland is removed and is fixed in formalin for subsequent examination by a neuropathologist.

During the autopsy blood was submitted for toxicology and culture, and vitreous samples were submitted for electrolytes. Samples of liver, kidney, and spleen were frozen for potential further examination.

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08/15/07

Patient Name: ROBLES, DIONICIO
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Patient Account: 20005972-517
Med. Rec. No.: (0150)1443175
Patient Name: ROBLES, DIONICIO
Age: 54 YRS DOB: 03/30/53 Sex: M Race: S
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-07-00224

MICROSCOPIC DESCRIPTION:

HEART, right and left ventricle, Slide 11, (1 H&E): Severe autolysis, no pathologic change identified.

LUNGS, left, Slide 10, and right, slide 9, (2 H&E): The general architecture is preserved. There is congestion and patchy alveolar edema.

KIDNEYS, Slides 2 and 4, (2 H&E): There is advanced autolysis, but the general architecture and glomeruli appear intact. There is mild thickening of small arteries and arterioles.

LIVER, Slide 3, (1 H&E): There is patchy macrovesicular steatosis and portal fibrosis with focal portal-portal bridging. There is advanced autolysis and post-mortem bacterial overgrowth is noted.

SPLEEN, Slide 1, (1 H&E): There is advanced autolysis. No pathologic change is noted.

PANCREAS, Slide 6, (1 H&E): Autolyzed.

ADRENAL GLANDS slides 1 and 4, (2 H&E): There is advanced autolysis. Post-mortem bacterial overgrowth is noted.

TISSUE SUBMITTED AS PARATHYROID, Slide 2, (1 H&E): No parathyroid tissue is identified. Aggregates of fat and connective tissue are noted.

TESTES, Slides 3 and 5, (2 H&E): Both testes demonstrate active spermatogenesis. The left testis features a focal area of fibrosis and sclerotic tubules but is otherwise without pathologic change.

Prostate, Slide 7, (1 H&E): The prostate has preserved architecture without pathologic change.

ESOPHAGUS AND STOMACH, Slide 7, (1 H&E): The mucosal layer is autolyzed, and no squamous epithelium is identified. The tissue is without pathologic change.

JEJUNUM AND ILEUM, Slide 8, (1 H&E): The mucosal layer is autolyzed, and no pathologic change is noted.

SKELETAL MUSCLE, Slide 13, (1 H&E): No inflammatory or degenerative change noted.

THYROID, slide 14 (1 H&E): There is rather extensive chronic inflammation with follicle formation and germinal centers focally present. There is accompanying fibrosis and apparent destruction of some thyroid follicles.

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Patient Location: AUTOPSY

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Patient Account: 20005972-517

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Patient Name: ROBLES, DIONICIO

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Autopsy No.: AU-07-00224

MICROSCOPIC DESCRIPTION:

Hurthle cell change is not noted. Residual thyroid tissue appears atrophic.

VERTEBRA, Slide 12, (1 H&E): Autolysis.

SKIN, LEFT TOE, Slide 5, (1 H&E): Marked acanthosis and hyperkeratosis.

SKIN, Slide 6, (1 H&E): Small yeast are seen in the stratum corneum. There is modest perivascular mixed inflammatory reaction in the dermis.

POST-MORTEM LABORATORY STUDIES

COMPREHENSIVE TOXICOLOGY PROFILE, PERFORMED BY AEGIS SCIENCES CORP:
Positive for Chlorpromazine, 63 ng/ml.

Comprehensive toxicology profile negative for alcohol, acetaminophen, stimulants, barbiturates, meprobamate, methadone, benzodiazepines, cannabinoids, cocaine metabolites, opiates, meperidine, fentanyl analogues, propoxyphene, pentazocine, salicylate, tricyclic antidepressants, atypical antidepressants, antipsychotics, miscellaneous.

VITREOUS ELECTROLYTES, PERFORMED BY UTMB HOSPITAL LABORATORIES:

Electrolytes (vitreous); Sodium 128 mmol/L, Potassium 14 mmol/L, CO2 14 mmol/L, Chloride not detected

SH /SH
09/14/07

Patient Name: ROBLES, DIONICIO

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Room/Bed:

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Patient Account: 20005972-517
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Patient Name: ROBLES, DIONICIO
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Pathology Report

FINAL AUTOPSY REPORT

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Autopsy No.: AU-07-00224

CLINICOPATHOLOGIC CORRELATION:

The decedent was a 54-year-old offender who was treated with thorazine and celexa because of mood and anxiety disorder and auditory hallucinations. He died suddenly and unexpectedly on 8/13/07.

The autopsy revealed no anatomic findings sufficient to explain death. The heart was minimally enlarged, but there was no significant coronary disease or myocardial abnormalities. Autopsy revealed no evidence of infectious or other disease to explain his demise. The finding of relatively advanced autolysis for the duration of the post-mortem interval suggests the possibility of hyperthermia and heat related death. Though there is no information regarding core body temperature at time of death, there was documentation of very high outdoor temperature. More compelling is his medication history and the recent addition of thorazine, a phenothiazine antipsychotic (the presence of this medication was confirmed in his blood post-mortem). This class of medication has been repeatedly shown to cause lethal temperature deregulation via combined anticholinergic and central thermoregulatory effects that inhibit afferent neuronal input to the hypothalamus. This inhibition decreases the hypothalamic compensatory effect of increasing cutaneous blood flow to aid in heat dissipation. Heat elimination is reduced, leading to systemic heat alteration. Other medications indicated in the development of hyperthermia include anticholinergic agents such as antihistamines and tricyclic antidepressants that may impair sweating mechanisms. Sympathomimetic drugs such as cocaine and amphetamines can increase body temperature, and diuretics may cause volume depletion and limit the ability to sweat and adjust cardiac output. Additional contributory factors in this patient include moderate obesity, and mild cardiomegaly, which may have pre-disposed him to fatal dysrhythmia in the setting of heat-induced stress. The vitreous electrolyte measurements post-mortem did not show a typical dehydration pattern. However, this does not negate the possibility of heat related death.

In summary, it is our opinion, based on the clinical history, scene investigation, and autopsy results, that the patient died as a result of hyperthermia, caused by environmental conditions plus pre-existing co-morbidities and medication. The manner of death is accidental.

References:

Dolinak, D, Matsches EW, and Lew, EO. *Forensic pathology: principles and practice*. Burlington (MA): Elsevier; 2005.

Coe, JI. Postmortem chemistry update: Emphasis on forensic application. *American Journal of Medical Pathology*, 14:2. 1993

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Patient Name: ROBLES, DIONICIO
Patient Location: AUTOPSY
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Patient Account: 20005972-517

Med. Rev. No.: (0150)1443175

Patient Name: ROBLES, DIONICIO

Age: 54 YRS DOB: 03/30/53 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

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Pathology Report

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Autopsy No.: AU-07-00224

CLINICOPATHOLOGIC CORRELATION:

09/14/07

JUDITH F. ARONSON, M.D., PATHOLOGIST

(Electronic Signature)

10/17/07

Patient Name: ROBLES, DIONICIO

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/18/07 - 0821

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END OF REPORT

Exhibit D

Patient Account: 20005972-517
 Med. Rec. No.: (0160)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/15/11 0828
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Pathology Report

112 8380

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00171

AMENDED COMMENT:

The last paragraph of the Clinicopathologic Correlation has been amended as follows:

In summary, it is our opinion that the manner of death is natural. The immediate cause of death is most likely environmental hyperthermia-related classic heat stroke. Toxicology tests and vitreous humor tests did not establish an alternative diagnosis.

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

AMENDED DIAGNOSIS

The diagnosis remains unchanged.

DAVID H. WALKER, M.D., PATHOLOGIST
 DAVID H. WALKER, M.D., PATHOLOGIST
 09/28/11

(Electronic Signature)

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 1110

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
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Pathology Report

DEPARTMENT OF MEDICAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/12/2011 04:36 Date/Time of Autopsy: 8/15/2011
 Pathologist/Resident: WALKER/XU Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole:	Clinical history of hypertension, hyperlipidemia, obesity, exposure to high ambient temperature (the unit afternoon temperature, 96°F - 100°F), sudden unexpected death, and status post unsuccessful cardiopulmonary resuscitation	C1,2
A. Heart:	Cardiomegaly (weight 450 g)	A3
B. Heart, left ventricle:	Hypertrophy	A3
C. Lungs, bilateral:	Congestion and mild edema (weight, right 500 g; left 590 g)	A3
D. Lung, right:	Acute food aspiration	A3
E. Bronchus, right:	Food aspiration (small amount)	A3
F. Larynx:	Food aspiration (small amount)	A3
G. Trachea:	Food aspiration (small amount)	A3
H. Coronary arteries:	Mild atherosclerosis	A3
II. Other findings:		
A. Spleen:	Splenomegaly	A4
B. Thyroid:	Chronic thyroiditis	A5
C. Gallbladder:	Cholesterolosis	A5

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 11:10

Continued....

Page: 2

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/15/11 0828
 Copies to:

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 Galveston, Texas 77555-0543
 (409) 772-1238
 Fax (409) 772-5683
Pathology Report

UTMB AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00171

CLINICAL SUMMARY:

The decedent was a 36-year-old black male TDCJ inmate with a past medical history of hypertension (BP, 142-162/90-94 mmHg), hyperlipidemia and obesity and obesity. His medications were: Medications: A洛dipine, Enalapril, Pravastatin and hydrochlorothiazide. On 8/11/2011, the patient complained of pain of his right arm. He went to bed at 2030, which was earlier than usual.

The patient was seen lying on his abdomen by an officer at 0200 on 8/12/2011 but he was not awakened at that time. He was found unresponsive, lying on his abdomen with no respiration in his bed in the cell at 0330 on 8/12/2011. The room had a fan blowing on him. No body temperature was taken. CPR was initiated. He was transported to Otto Kaiser Memorial Hospital at 0434 with CPR in progress. Cardiac monitor showed asystole with no vital signs. Attempted intubation and placement of IV lines were unsuccessful. Cyanosis was present on the face and extremities. Rigor mortis was present in the extremities with dependent lividity in the skin. Despite attempted cardiopulmonary resuscitation, the patient was unable to be revived and was pronounced dead at 0436 on 8/12/2011. The temperature (open to outside) at 1530 in the unit of Connally was 96 deg F on 8/11/2011 and 100 deg F on 8/12/2011.

The body was picked up by Carnes Funeral Home at 1130 on 8/12/2011 and delivered to UTMB at 1630 the same day. A complete autopsy was performed on 8/15/2011.

YX /da
 08/29/11

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 1110

Continued....

Page: 3

Patient Account: 20005972-517
Med. Rec. No.: (0150)1128380
Patient Name: MARCUS, KELLY DON
Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/15/11 0828
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Fax (409) 772-5683
Pathology Report

UNIVERSITY OF TEXAS MEDICAL BRANCH AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00171

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by right big toe band as "Marcus, Kelly Don", is a well nourished, well developed, black male, measuring 188 cm in length, and weighing approximately 275 lbs according to recent medical records. The general appearance is older than the reported age of 36 years. The body is unclad. Rigor mortis is present in the arms and legs, and there is fixed lividity on the dorsal surfaces. The body is moderately to severely decomposed. The head is normocephalic with essentially no scalp hair.

The irides are brown with equal pupils measuring 0.4 cm in diameter. The corneas are slightly cloudy, the conjunctivae are congested, and the sclerae are edematous and congested. The nares are patent with bloody exudate. The upper and lower teeth are present. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male. The chest diameters are normally proportioned. The abdomen is protuberant. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable.

The back is unremarkable. The arms and legs are unremarkable. The scrotum is enlarged (back to normal size after opening). The penis is normal male for the age.

The following evidence of medical intervention is present: There is no medical intervention present.

The following marks and scars are present: There is an abrasion on the right lower chest, measuring 1.2 x 0.5 cm in size. There are two abrasions observed on the right elbow posteriorly, measuring 0.7 x 0.3 cm and 0.4 x 0.3 cm in size respectively. There are two similar tattoos around each wrist. There is small tattoo on the left middle arm laterally. There is a dry skin area on the left middle chest measuring 6 x 4 cm.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 6 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The chest cavity is relatively small due to abdominal organs elevating the diaphragm. The left pleural cavity contains no fluid, and the right contains 60 ml of bloody fluid.

The pericardial sac contains 10 ml of clear fluid.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains 200 ml of yellow clear fluid. There are minimal

Patient Name: MARCUS, KELLY DON
Patient Location: AUTOPSY
Room/Bed: -
Printed Date / Time: 11/17/11 - 1110

Continued...

Page: 4

Patient Account: 20005972-517
Med. Rec. No.: (0150)1128380
Patient Name: MARCUS, KELLY DON
Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/16/11 0628
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Galveston, Texas 77555-0543
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Pathology Report

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

GROSS DESCRIPTION:

peritoneal adhesions.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 450 gm (normal male 270-360 gm). The pericardium is essentially smooth. There is scant amount of epicardial fat anteriorly. The left and right coronary ostia are identified in the normal locations. The heart is examined by transverse serial slicing of four sections from the apex and then opening following the flow of blood. The myocardium is homogeneous red-brown with no scars present. The endocardium is normal. The left ventricular wall is 1.5 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 12.5 cm (normal 12-13 cm), pulmonic valve 8 cm (normal 8.5-9.0 cm), mitral valve 11.2 cm (normal 10.5-11.0 cm), and aortic valve 7.5 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries reveal only minimal atherosclerosis. The aorta exhibits minimal to mild atherosclerosis. The infrarenal aortic segment exhibits minimal atherosclerosis. The celiac, superior and inferior mesenteric, and renal arteries are unremarkable with no atherosclerosis. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: There is scant food debris found in the larynx and trachea. The laryngeal mucosa is normal, and the vocal cords are normal with no lesions. The tracheal mucosa is normal.

Lungs: The right lung weighs 500 gm (normal male 435 gm), and the left 590 gm (normal male 385 gm). The pleural surfaces of the right and left lungs are smooth and transparent with no obvious carbon deposition. Lividity is present in the dorsal surface. There is scant food debris identified in the bronchus of the right lung. The left lung is inflated with formalin before sectioning. The hilar nodes are normal. The lung parenchyma is dark red with fine porosity, and there is no consolidation.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal with no lesions.

Tongue: The tongue has a finely granular surface with no coating.

Patient Name: MARCUS, KELLY DON
Patient Location: AUTOPSY
Room/Bed: -
Printed Date / Time: 11/17/11 - 1110

Continued....

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Patient Account: 20005972-517
 Med. Rec. No.: (0160)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted : 08/15/11 0828
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GROSS DESCRIPTION:

Stomach and duodenum: The stomach contains about 700 to 800 ml of fresh food. The mucosa is normal.

The duodenal mucosa is normal.

Pancreas: The pancreas has a normal conformation. It is tan-yellow, normally lobulated and firm. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains about 10 ml of gray-green bile and with no stones. The mucosa is green and velvety with strawberry-like yellow granules. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1100 gm (normal male 1400-1900 gm). The liver surface is serially sliced to reveal a homogeneous lobular pattern with fine cysts (due to decomposition). The cut surface shows no focal abnormalities.

Small Bowel: The serosa is smooth and transparent with no adhesions. The bowel is normal throughout. The lumen contains pink-brown digested food stuff. The mucosa is normal.

Large bowel: The serosa is smooth and transparent with no adhesions. The lumen contains loosely formed stool. The mucosa is normal.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal.

Reticulo-endothelial System: Spleen: The spleen weighs 290 gm (normal 125-195 gm). It is normal in shape with increased size. The cut surface is soft and red-purple with no lesions.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are normal.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 120 gm and the left 130 gm (normal male 125-170 gm). The capsules strip with ease to reveal dark red cortical surfaces. The cut surface reveals poorly demarcated corticomedullary junctions. The pelvis and calyces

Patient Name: MARCUS, KELLY DON

Patient Location: AUTOPSY

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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/15/11 0828
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Pathology Report

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

GROSS DESCRIPTION:

are normal. The renal pelvic mucosa is normal. Perihilar adipose tissue is moderate.

Ureters: The ureters are normal throughout their length, measuring 0.4 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is normal. The trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces without distinct architecture. The seminal vesicles are normal.

Testes: The right testis weighs 30 gm, and the left 32.4 gm (normal 20-25 gm). The tunica albuginea are tan-white, smooth and glistening. The cut surfaces are soft and tan-yellow, with no lesions.

ENDOCRINE SYSTEM: **Thyroid:** The thyroid weighs 16.9 gm (normal 10-22 gm), and is red-brown, bosselated and glistening. The cut surface is homogeneous, translucent, red-brown with no lesions.

Parathyroids: Several brown soft fragments of tissue are collected as possible parathyroids.

Adrenal glands: The right adrenal gland weighs 6.1 gm and the left 7.6 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position. Serial slicing in the transverse plane reveals 1 mm thick firm golden yellow/brown cortices, with gray soft medullae and no lesions.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1540 gm (normal male 1200-1400 gm). The gyri and sulci display a normal pattern without edema. The leptomeninges are unremarkable. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, uncus or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Blood and vitreous samples were submitted for toxicologic tests. Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
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Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)1128380

Patient Name: MARCUS, KELLY DON

Age: 36 YRS DOB: 04/28/75 Sex: M Race: B

Admitting Dr.: OUTSIDE TDGJ

Attending Dr.: OUTSIDE TDGJ

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

GROSS DESCRIPTION:

YX /da
08/17/11

Patient Name: MARCUS, KELLY DON
Patient Location: AUTOPSY
Room/Bed: -
Printed Date / Time: 11/17/11 - 1110

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/15/11 0828
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00171

MICROSCOPIC DESCRIPTION:

Heart, right and left ventricle, Slides 11-15, (5 H&E):
 There is severe autolysis. In the anterior, lateral, and posterior left ventricle and the septum, cardiomyocytes exhibit hypertrophic. There are no contraction band necroses or fibrosis in the left and right ventricle. There is postmortem bacterial growth in the tissue.

Lung, left, Slides 16 and 17 (2 H&E):
 The architecture is preserved and demonstrates congestion. No inflammation or thrombi are noted. There is postmortem bacterial growth in the tissue.

Lung, right, Slides 18-20 (3 H&E):
 The architecture is preserved and demonstrates congestion with focal edema. There is vegetable matter in the bronchus and alveolar spaces without inflammatory reaction. Macrophages are seen in the alveolar spaces. No thrombus is noted. There is postmortem bacterial growth in the tissue.

Kidney, bilateral, Slides 3 and 4, (2 H&E):
 There is severe autolysis, but the general architecture is preserved without pathologic change. There is postmortem bacterial growth in the tissue.

Adrenal gland, Slides 1 and 2, (2 H&E):
 There is autolysis but normal architecture without pathologic change.

Liver, Slide 5, (1 H&E):
 There is severe autolysis, but the general architecture is preserved. There is postmortem bacterial growth in the tissue.

Spleen, Slide 6, (1 H&E):
 There is severe autolysis. The red pulp is congested, and the white pulp reveals mild atrophy.

Pancreas, Slide 22, (1 H&E):
 There is severe autolysis but normal architecture without pathologic change.

Thyroid, Slide 7, (1 H&E):
 There is severe autolysis. There are diffuse aggregates of lymphocytes with lymphoid follicle formation. The pathologic change is suggestive of chronic thyroiditis.

Parathyroid, Slide 24, (1 H&E):
 No parathyroid is identified, but six pieces of lymph nodes show no pathologic change.

Testes, Slides 1 and 2, (2 H&E):
 There is active spermatogenesis.

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 1110

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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1128380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/15/11 0828
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Pathology Report

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00171

MICROSCOPIC DESCRIPTION:

Prostate, Slide 10, (1 H&E):

There is severe autolysis. No pathologic change is noted.

Urinary bladder, Slide 23, (1 H&E):

There is severe autolysis. No pathologic change is noted.

Tongue, Slide 21, (1 H&E):

No pathologic change is noted.

Esophagus, Slide 8, (1 H&E):

There is mucosal autolysis, but otherwise no pathologic change.

Stomach, Slide 8, (1 H&E):

There is mucosal autolysis, but otherwise no pathologic change.

Gallbladder, Slide 8, (1 H&E):

There is severe autolysis, but otherwise no pathologic change.

Jejunum, Slide 9, (1 H&E):

There is severe autolysis, but otherwise no pathologic change.

Sigmoid colon, Slide 9 (1 H&E):

There is severe autolysis, but otherwise no pathologic change.

Bone marrow, 25, (1 H&E):

There is severe autolysis. Cellularity is 50%. There is postmortem bacterial growth in the tissue.

YX /da
 08/29/11

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 1110

Continued...

Page: 10

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1126380
 Patient Name: MARCUS, KELLY DON
 Age: 36 YRS DOB: 04/28/75 Sex: M Race: B
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
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Pathology Report



Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

CLINICOPATHOLOGIC CORRELATION:

The decedent was a 36-year-old black male TDCJ inmate with a past medical history of hypertension (BP, 142-162/90-94 mmHg), hyperlipidemia and obesity. His medications were: Alodipine, Enalapril, Pravastatin and hydrochlorothiazide. On 8/11/11, the patient complained of pain in his right arm. He went to bed at 2030, which was earlier than usual. He was found unresponsive, lying on his abdomen without respirations in his bed in the cell at 0330 on 8/12/2011. No body temperature was taken (the unit afternoon temperature, 96 OF - 100 OF). Cardiopulmonary resuscitation (CPR) was initiated. Rigor mortis was present in the extremities with dependent lividity in the skin. Despite attempted CPR, the patient was unable to be revived and was pronounced dead at 0436 on 8/12/2011. A complete autopsy was performed on 8/15/2011.

At autopsy, the heart revealed cardiomegaly with left ventricular hypertrophy. The aorta revealed no significant atherosclerosis, and the coronary arteries were patent with mild atherosclerosis. Food aspiration was found in the larynx, trachea, and bronchus. Histology showed that most of the organs were severely autolytic with postmortem bacterial growth. Both lungs were congested with mild edema. There is acute food aspiration in the alveolar spaces with no inflammatory reaction.

According to this patient's clinical history and autopsy findings, environmental hyperthermia related heat stroke is considered likely though toxicology tests are still pending. Heat stroke (HS) is a serious and potentially life-threatening condition defined as a core body temperature $> 40.60^{\circ}\text{C}$. Two forms of HS are recognized, classic heat stroke, usually occurring in very young or elderly persons, and exertional heat stroke, more common in physically active individuals. An elevated body temperature and neurologic dysfunction are necessary but not sufficient to diagnose HS. Associated clinical manifestations such as extreme fatigue; hot dry skin or heavy perspiration; nausea; vomiting; diarrhea; disorientation to person, place, or time; dizziness; uncoordinated movements; and reddened face are frequently observed. Potential complications related to severe HS are acute renal failure, disseminated intravascular coagulation, rhabdomyolysis, acute respiratory distress syndrome, acid-base disorders, and electrolyte disturbances. Long-term neurologic sequelae (varying degrees of irreversible brain injury) occur in approximately 20% of patients. The prognosis is optimal when HS is diagnosed early and management with cooling measures and fluid resuscitation and electrolyte replacement begins promptly. The prognosis is poorest when treatment is delayed > 2 hours.

A heat wave is defined as three or more consecutive days of air temperatures $> 32.20^{\circ}\text{C}$. Exposure to excessive heat may cause illness, as heat directly induces tissue injury, the severity of which is dependent upon the critical thermal

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
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Page: 11

Patient Account: 20005972-517

Med. Rec. No.: (0180)1128380

Patient Name: MARCUS, KELLY DON

Age: 36 YRS DOB: 04/28/75 Sex: M Race: B

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/15/11 0828

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00171

CLINICOPATHOLOGIC CORRELATION:

maximum (i.e., the level and duration of core heating). The critical thermal maximum in humans is a body temperature of 41.6 deg C to 42 deg C for between 45 minutes and 8 hours. At extreme body temperatures (e.g., 49-50 deg C), all cellular structures are destroyed, and cellular necrosis occurs in < 5 minutes.

The precise incidence of HS is unknown for many reasons. First, in the United States, heat-related death is not a reportable condition in any state. Second, the definition of HS varies, resulting in underreporting of HS cases. Third, many heat-related illnesses and deaths are unrecognized as such and are not reported. Therefore, the reported incidence of HS in the United States varies from 17.6 to 26.5/100,000. Why some cases progress to HS and others do not is unclear, but it appears that genetic polymorphisms may determine susceptibility; the likely candidate genes include those that encode cytokines, coagulation proteins, and heat shock proteins. Mortality rates for HS range from 10% to 70%, depending on the severity and age of the patient. The greatest numbers of deaths occur when treatment is delayed for >2 hours.

This patient had several risk factors of HS: lack of air conditioning, chronic illness, obesity, and use of diuretics (hydrochlorothiazide). Studies showed that diuretics may impair thermoregulation. Confirmation of dehydration was attempted via vitreous humor electrolyte analysis, but prolonged postmortem intervals and putrefaction complicated the assessment.

In summary, it is our opinion that the manner of death is natural. The immediate cause of death is most likely environmental hyperthermia-related classic heat stroke though toxicology tests and vitreous humor tests are still pending.

References:

- 1.Theresa Pluth Yeo, Heat Stroke, A Comprehensive Review, AACN Clinical Issues, 2004; 15 (2): 280-293
- 2.Prevention and treatment of heat injury, Med Lett Drugs Ther. 2003; 45:58-60.

YX /da
08/29/11

DAVID H. WALKER, M.D., PATHOLOGIST

09/02/11

(Electronic Signature)

Patient Name: MARCUS, KELLY DON
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 11/17/11 - 1110

Page: 12

Exhibit E

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1578039
 Patient Name: TOGONIDZE, ALEXANDER
 Age: 45 YRS DOB: 12/02/66 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted : 08/09/11 1340
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 Pathology Report

1578039

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00167

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/8/2011 08:15 Date/Time of Autopsy: 8/10/2011
 Pathologist/Resident: CAMPBELL/DIVATIA Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

- I. Body as a whole: Clinical history of hypertension, hyperlipidemia, diabetes mellitus and hyperthermia (terminal body temperature greater than 106 degrees Fahrenheit) C1-3
 - A. Organs in situ: Severe autolytic changes A4
- / B. Pulmonary system:
 - 1. Lungs, bilateral: Congestion and edema (weights: right, 730 gm and left, 620 gm) A4
- / C. Cardiovascular system:
 - 1. Pulmonary arteries: No thromboemboli identified A4
 - 2. Coronary arteries: Moderate atherosclerosis with maximal stenosis of 40% (right coronary artery) A4
 - a. Heart: No evidence of myocardial infarct A4

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1578039

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: TOGONIDZE, ALEXANDER
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 06/28/12 - 0949

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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1578039
 Patient Name: TOGONIDZE, ALEXANDER
 Age: 45 YRS DOB: 12/02/66 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
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 Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00167

CLINICAL SUMMARY:

The deceased is a 44 year old Caucasian TDCJ inmate with a past medical history of diabetes mellitus, who was found unresponsive in his cell on 8-8-11 at approximately 07:50 am. Cardiopulmonary resuscitation was initiated. The vital signs recorded at this time were body temperature greater than 106 degrees Fahrenheit, pulse 162/min, respirations 40/min, and blood pressure 60/40 mmHg. An automatic external defibrillator was used which advised no shock and to continue resuscitation. Upon arrival, emergency medical services applied a heart monitor/defibrillator which showed asystole, and resuscitation was subsequently stopped. The patient was declared dead on 8-8-11 at 8:15 a.m. A complete autopsy was performed on 08-10-11 at 10:00 a.m.

Prescribed medications recorded in supplied Correctional Managed Care Urgent/Emergent Care records include the following:

Ecotrin (aspirin)
 Tenformin (atenolol - beta blocker)
 Benzac gel
 Tegretol (carbamazepine)
 Vasotec (enalapril - angiotensin converting enzyme inhibitor)
 Pamelor (nortriptyline - tricyclic antidepressant)
 Prilosec (omeprazole)
 Pravachol (pravastatin)
 Glucophage (metformin).

GC /GC
 06/27/12

Patient Name: TOGONIDZE, ALEXANDER
 Patient Location: AUTOPSY
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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1578039
 Patient Name: TOGONIDZE, ALEXANDER
 Age: 45 YRS DOB: 12/02/66 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted : 08/09/11 1340
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 Fax (409) 772-5683
 Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00167

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by left wrist band as "Alexander Togonidze", is a well developed, well nourished, Caucasian male, measuring 167 cm in length, and weighing approximately 188 lbs according to recent medical records. The general appearance is consistent with the reported age of 44 years. No personal belongings are accompanying the body. Rigor mortis is present in the arms and legs and there is fixed lividity on the dorsal surface. The head is normocephalic with short scalp hair (1.5 cm).

The pupils are equal and measure 0.3 cm in diameter. The corneas are cloudy, the conjunctivae and sclerae are mildly congested. The nares are patent without exudate. Dentition is adequate. Buccal membranes are pale without lesions. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is that of a normal male. The chest diameters are normally proportioned. The abdomen is slightly protuberant. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable.

The back is normal. The arms and legs are unremarkable. The genitalia are those of a normal male for the age.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 2.5 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The left and right pleural cavities contain 10 and 15 ml of clear fluid respectively.

The pericardial sac contains minimal clear fluid.

The 3rd and 4th right ribs and 3rd to 5th left ribs are fractured following cardiopulmonary resuscitation.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries. The height of the left diaphragm is at the 9th intercostal space in the mid axillary line.

The abdominal cavity contains minimal clear fluid (15-20 ml). There are no peritoneal adhesions.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 300 gm (normal male 270-360) and is normal in shape. The pericardium is unremarkable. The heart is examined by transverse serial slicing; opening following the flow of blood. The myocardium is homogeneous red-brown without scars, infiltrates or lesions. The endocardium is smooth and transparent. The left ventricular wall is 1.4 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle

Patient Name: TOGONIDZE, ALEXANDER
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Patient Account: 20005972-517

Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00167

GROSS DESCRIPTION:

and free wall, and the right ventricle is 0.4 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous with the exception of the aortic valve which has demonstrated cusps.

Valve circumferences measured on the fresh heart are: tricuspid valve 12.8 cm (normal 12-13 cm), pulmonic valve 8.7 cm (normal 8.5-9.0 cm), mitral valve 11.6 cm (normal 10.5-11.0 cm), and aortic valve 8.1 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left coronary arteries. The coronary arteries reveal moderate atherosclerotic plaques with up to 40% stenosis of the right coronary artery located 10.5 cm from the origin. There is no evidence of hemorrhage, rupture/thrombosis of the plaques. The aorta exhibits atherosclerotic plaques without ulceration or calcification (10 % of this area involved by plaques) in the thoracic and abdominal portions. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa and vocal cords are normal. The tracheal mucosa is normal.

Lungs: The right lung weighs 730 gm (normal male 435), and the left 620 gm (normal male 385). The pleural surfaces are congested with anthracotic areas. Lividity is dorsal. The left lung is inflated with formalin before sectioning and the right lung is examined unfixed. The bronchial and vascular trees are normal. The hilar nodes are normal. The lung parenchyma and both the lungs is congested and edematous.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal. The esophagus is firmly anchored to the diaphragm.

Tongue: The tongue is normal.

Stomach and duodenum: The stomach contains approximately 30 to 40 ml of dark colored fluid. The mucosa is predominantly autolyzed.

The duodenal mucosa is normal.

Pancreas: The pancreas and pancreatic duct are normal. The pancreatic duct is patent.

Biliary tract: The gallbladder mucosa, wall and serosa are normal. The

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GROSS DESCRIPTION:

gallbladder contains approximately 12 ml of dark green thin bile. No stones are identified. The wall measures up to 0.5 cm in thickness. The cystic duct, hepatic duct, and common duct are normal. The bile is freely expressed from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1320 gm (normal male 1400-1900). The cut surface of the liver is unremarkable. No discrete lesions are identified.

Small Bowel: The mucosal and serosal surfaces of the small bowel are normal. The lumen contains fecal material. The wall is 0.4 cm thick.

Large bowel: The mucosal and serosal surfaces are normal. The lumen contains feces. No discrete lesions are identified.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal.

Reticulo-Endothelial System: Spleen: The spleen weighs 200 gm (normal 125-195 gm). It is normal in shape, size, density and color.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right and left kidneys weigh 170 and 160 gm respectively (normal male 125-170 gm). The capsules strip with ease to reveal dark brown unremarkable cortical surfaces. Serial slicing reveals well demarcated cortico-medullary junctions. The cortices are 0.4 cm thick; the medullas 1.4 cm thick. The pelvis and calyces are normal. The renal pelvic mucosa is normal. Perihilar adipose tissue is normal.

Ureters: The ureters are normal throughout their length, measuring 0.2 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is normal. The trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. The cut surface of the prostate is unremarkable. No discrete lesions are identified. The seminal vesicles are normal.

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Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

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Autopsy No.: AU-11-00167

GROSS DESCRIPTION:

Testes: The right and left testes weigh 26.7 and 25 gm respectively (normal 20-25 gm). The cut surface of both the testes is normal. No discrete lesions are identified.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 26.5 gm (normal 10-22 gm), and is red-brown and bosselated. The cut surface is homogeneous and red-brown. No discrete lesions are identified.

Adrenal glands: The right and left adrenal glands weigh 6.2 and 5.7 gm respectively (normal 5-6 gm). The cut surface of both adrenal glands are normal. No discrete lesions are identified.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1500 gm (normal male 1200-1400). The gyri and sulci display a normal pattern without significant edema or atrophy. The leptomeninges are normal. The circle of Willis, basilar and vertebral arteries show mild atherosclerosis. No indentation/herniation of the cingulate gyri, unci or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

During the autopsy, blood and vitreous samples were retained for potential further testing. Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

Blood from heart was submitted for comprehensive toxicologic analysis, and vitreous fluid was submitted for electrolyte analysis (testing laboratory: Aegis Crimes, Aegis Sciences Corporation, Nashville, TN).

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08/17/11

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Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

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Pathology Report**FINAL AUTOPSY REPORT**

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00167

MICROSCOPIC DESCRIPTION:

Thyroid (slide 1A, H&E): No pathologic change.

Adrenal gland (slide 2A, H&E): No pathologic change, examination limited by autolysis.

Testis (slide 2A, H&E): No pathologic change. Spermatogenesis present.

Spleen (slide 3A, H&E): Reduction of white pulp, examination limited by autolysis.

Pancreas (slide 4A, H&E): No evident pathologic change, examination limited by severe autolysis.

Kidneys (right: slide 5A; left: slide 6A; H&E): Mild interstitial fibrosis, examination limited by autolysis.

Prostate gland (slide 7A, H&E): No pathologic change.

Vertebral body (slide 8A, H&E, decalcified): Cellularity: 60%; normal marrow trilineage cellular composition; normal bony trabeculae.

Liver (slide 9A, H&E): Steatohepatitis, macro and micro, centrilobular, moderate.

Colon (slide 10A, H&E): No pathologic change.

Ileum (slide 11A, H&E): No pathologic change.

Lung, left apex (slide 12A, H&E): Healed granulomas with central necrosis, consistent with old (inactive) tuberculosis.

Lungs (left: slide 13A; right: slides 14A-16A; H&E): Congestion and edema; post-mortem intravascular bacterial growth present.

Heart (right: slide 17A; left: slides 18A-19A; H&E): No pathologic change, examination limited by severe autolysis.

Coronary artery, right (slide 20A, H&E): Atherosclerosis, 40% maximal stenosis.

Blood toxicologic and vitreous electrolyte analysis results and interpretations:

Positive toxicologic results:

Patient Name: TOGONIDZE, ALEXANDER

Patient Location: AUTOPSY

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Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

FINAL AUTOPSY REPORT

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MICROSCOPIC DESCRIPTION:

Carbamazepine: 2.5 mcg/mL (reporting threshold 2 mcg/mL) - within therapeutic range

Nortriptyline: 751 ng/mL (reporting threshold 50 ng/mL) - somewhat above therapeutic range of 50-375 ng/mL and above level of 500 ng/mL at which toxicity has been reported. Effects of toxicity include cardiac arrhythmias. A reported lethal level is 13,000 ng/mL. Because the source of blood in this case was heart, artifactual post-mortem concentration is a possible factor in the elevated level of this drug.

All other analytes were negative.

Vitreous analysis results:

Urea Nitrogen: 38 mg/dL (reporting threshold 1 mg/dL) - mildly elevated (normal 8-20 mg/dL)

Sodium (Na): 123 mmol/L (reporting threshold 1 mmol/L) - decreased (normal 135-150 mmol/L)

Potassium (K): >9 mmol/L (reporting threshold 1 mmol/L) - normal (normal < 15 mmol/L)

Creatinine: 1.6 mg/dL (reporting threshold 0.1 mg/dL) - mildly increased (normal 0.6-1.3 mg/dL)

The above vitreous findings are somewhat consistent with hyponatremic dehydration, however chloride is normal (usually decreased in that condition).

References:

1. Winek CL, et al. Drug and chemical blood level data 2001. *Forensic Sci. Int.* 122:107-123, 2001.
2. Collins KA. Postmortem vitreous analyses. *Medscape Reference, Drugs, Diseases and Procedures*. [online: <http://emedicine.medscape.com/article/1966150>], 2011.

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06/27/12

Patient Name: TOGONIDZE, ALEXANDER

Patient Location: AUTOPSY

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Patient Account: 20005972-517

Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 1340

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Pathology Report

NEUROPATHOLOGY CONSULTATION

Neuropath Office (409)772-2881

Autopsy No.: AU-11-00167

CLINICAL HISTORY:

The deceased is a 44 year old Caucasian TDCJ inmate with a past medical history of diabetes mellitus, who was found unresponsive in his cell on 8-8-11 at approximately 07:50 a.m. Cardiopulmonary resuscitation was initiated. The vital signs at this time were temperature greater than 106 degrees Fahrenheit, pulse 162/min, respirations 40/min, and blood pressure 60/40 mmHg. An automatic external defibrillator was used which advised no shock and to continue resuscitation. Emergency medical services arrived and an electrocardiogram was performed and analyzed. It showed asystole, and resuscitation was subsequently stopped. The patient was declared dead on 8-8-11 at 8:15 a.m.. An autopsy was performed on 08-10-11 at 10:00 a.m. The cause of death in this patient is hyperthermia and the manner is accidental.

PATHOLOGIST/RESIDENT: CAMPBELL/DIVATIA

GROSS DESCRIPTION:

Submitted for neuropathologic examination are brain (unfixed weight 1500 g), convexity and posterior fossa dura, spinal cord with spinal dura (length 29 cm, conus medullaris and filum terminale present), and pituitary gland.

The dura is grossly unremarkable. There is no evidence of significant jaundice staining. There is no evidence of acute hemorrhages, subdural membranes, or masses. There is no evidence of thrombosis of the superior sagittal sinus.

External examination reveals the brain to be intact and normally developed with transparent convexity leptomeninges. There is mild gyral flattening, but no evidence of arachnoid hemorrhage, exudate, focal softening, discoloration, atrophy, or herniation. The major cerebral arteries have no significant atherosclerosis. The circle of Willis has a normal symmetric pattern, and no aneurysms or other malformations are identified.

The hemispheres are sliced coronally, revealing normal anatomic development and normal cerebral ventricles. The cerebral white matter is expanded and soft and pink due to incomplete fixation, and the gray-white junction is focally indistinct. No focal gross lesions are identified in the hemispheres. The brainstem and cerebellum are separated through the cerebellar peduncles, and the cerebellum is sliced sagittally and the brainstem transversely. Both structures are normally developed, and have normal pigmentation of substantia nigra and locus ceruleus. There is no evidence of gross lesions.

The spinal dura is opened anteriorly, revealing no evidence of extradural, subdural or arachnoid hemorrhage. The spinal cord is sliced transversely at 0.5 to 1 cm intervals, revealing normal development and no evidence of parenchymal lesions.

The pituitary gland is intact and normally developed, without external

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Patient Location:

Room/Bed:

Printed Date / **TOGONIDZE, ALEXANDER**
AUTOPSY Page:

Patient Account: 20005972-517

Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

NEUROPATHOLOGY CONSULTATION

Neuropath Office (409)772-2881

Autopsy No.: AU-11-00167

GROSS DESCRIPTION:

hemorrhages or other lesions. The horizontal cut surface reveals a darkly colored anterior lobe, but no evidence of focal internal lesions.

Photographs made during gross brain examination: none.

DICTATED BY: GERALD A. CAMPBELL, M.D., PATHOLOGIST
06/27/12

SECTIONS TAKEN:

B1: Pituitary gland; B2: Right frontal, area 8; B3: Left basal ganglia; B4: Right cerebellum; B5: Right hippocampus.

FINAL DIAGNOSES:

A. Brain and cranial dura (weight 1500 g):

1. Brain: Cerebral edema, moderate (negative for herniations)
2. Cerebral cortex and white matter: Autolytic changes
3. Frontal white matter: Cerebral small vessel disease, mild

B. Spinal cord and spinal dura (29 cm caudal segment): No abnormalities

C. Pituitary gland: No abnormalities

COMMENTS:

Small vessel disease in this context refers to medial thickening and/or hyalinization of small parenchymal arteries and arterioles, and in some cases increased adventitial collagen of small veins and venules.

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

GERALD A. CAMPBELL, M.D., PATHOLOGIST
Division of Neuropathology .

Patient Name:

Patient Location:

Room/Bed:

Printed Date / Time: 06/28/12 / 1340
TOGONIDZE, ALEXANDER
AUTOPSY

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06/28/12 - 0949

Patient Account: 20005972-517

Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 1340

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Pathology Report

Patient Name:

Patient Location:

Room/Bed:

Printed Date / TOGONIDZE, ALEXANDER

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Patient Account: 20005972-517

Med. Rec. No.: (0150)1578039

Patient Name: TOGONIDZE, ALEXANDER

Age: 45 YRS DOB: 12/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 1340

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00167

CLINICOPATHOLOGIC CORRELATION:

This 44-year-old Caucasian male decedent was found unresponsive in his cell in the Michael Unit in Palestine, Texas at approximately 7:50 am on August 8, 2011. His body temperature was recorded as greater than 106 degrees F., and he was tachycardic, tachypneic and hypotensive prior to cardiac arrest. The maximum environmental temperature for Palestine for the period 8/7 to 8/8/2011 was 104 degrees F. (weathersource.com). The decedent also had chronic diseases, including diabetes and hypertension, that may convey a general risk for hyperthermia, and his prescribed medications included atenolol, a beta blocker, which is known to interfere with cardiovascular response to increased environmental temperatures. Other cardiovascular and psychotropic drugs in this decedent's medication list are also possible factors increasing the risk for hyperthermia. There is no one specific autopsy finding that is universally recognized as diagnostic of death due to hyperthermia, however the results in this case, which included severe autolytic changes in most organs and absence of other anatomic causes of death, are consistent with this conclusion. Post-mortem toxicologic and vitreous electrolyte analyses were inconclusive.

In summary, based on the autopsy findings in combination with the clinical history and circumstances of death discussed above, we conclude that hyperthermia is the cause of death in this case. Chronic diseases, medications and environmental conditions are likely contributory factors. The manner of death is accidental.

GC /GC
06/27/12

GERALD A. CAMPBELL, M.D., PATHOLOGIST
GERALD A. CAMPBELL, M.D., PATHOLOGIST
06/27/12

(Electronic Signature)

Patient Name: TOGONIDZE, ALEXANDER
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END OF REPORT

Exhibit F

Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

Patient Name: COOK, CHARLES LEE

Age: 54 YRS DOB: 11/02/57 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 1322

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Pathology Report

1459546

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00166

AUTOPSY INFORMATION:

Occupation: INMATE	Birthplace: UNKNOWN	Residence: TEXAS
Date/Time of Death: 8/8/2011 04:45	Date/Time of Autopsy: 8/10/2011	
Pathologist/Resident: CAMPBELL/KOSHY		Service: TDC CONTRACT
Restriction: NONE		

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Clinical history of hyperthermia (axillary temperature of 107.9 degrees Fahrenheit)

- A. Lungs, bilateral: pulmonary edema C1
- B. Brain: congestion (1670 grams) A4
- C. Blood toxicology positive for chlorpromazine (2.2 mcg/ml) A4
- D. Blood toxicology positive for carbamazepine (65 ng/ml) A4
- E. Liver: Autolysis A4
- F. Kidneys, bilateral: Autolysis A4
- G. Colon: Autolysis A4
- H. Ileum: Autolysis A4

II. Other findings:

- A. Heart: Cardiomegaly (weight 420 grams) A3
- 1. Heart, left ventricle: Myocyte hypertrophy A3
- B. Heart, left anterior descending artery: Atherosclerosis encompassing 60% of the lumen at maximal obstruction A3
- 1. Heart, subendocardium: Fibrosis A3
- C. Heart, ventricles: Biventricular dilation A3
- D. Arteries, aorta: Atherosclerosis of approximately 20% of surface area, predominantly infrarenal A5
- E. Heart, epicardium: Small focal collections of lymphocytes in the epicardium A5
- F. Spleen: Congestion A5

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.

IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD; 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: COOK, CHARLES LEE

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Patient Account: 20005972-517
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00166

CLINICAL SUMMARY:

This patient was a 53 year old white TDCJ inmate with a past medical history of schizoaffective disorder, mild mental retardation, and hypertriglyceridemia, who was found unresponsive in his cell on 8-8-11 at 3:00 AM. The patient had no pulse or respirations. His skin was hot and dry, pupils were non reactive and dilated, and his face and nail beds were cyanotic. Cardiopulmonary resuscitation was started. An automatic external defibrillator was used which advised no shock and to continue resuscitation. Emergency medical services arrived, and an electrocardiogram was conducted and analyzed. It showed asystole, and resuscitation was subsequently stopped. The patient expired on 8-8-11 at 3:35 AM. Approximately 40 minutes after resuscitation was completed, axillary body temperature was recorded to be 107.9 degrees Fahrenheit.

JTK/da
 08/11/11

Patient Name: COOK, CHARLES LEE
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 02/17/12 - 1310

Continued....

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Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

Patient Name: COOK, CHARLES LEE

Age: 54 YRS DOB: 11/02/57 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 1322

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Galveston, Texas 77555-0543

(409) 772-1238

Fax (409) 772-5683

Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00166

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by right ankle identification as "Charles Cook", is a well developed, well nourished, white male, measuring 183 cm in length, and weighing approximately 200 lbs according to recent medical records. The general appearance is consistent with the reported age of 53 years. Rigor mortis is present in the arms and legs and there is fixed lividity on the posterior surfaces. The head is normocephalic with sparse white scalp hair. There are bluish-green areas of skin on the lateral surfaces of the lower chest wall and in the abdomen consistent with decomposition. These are seen bilaterally. There is also that same discoloration at the umbilicus.

The irides are blue in color with equal pupils measuring 0.3 cm in diameter. The corneas are cloudy, the conjunctivae are pale, and the sclerae are white. The nares are patent with no exudate. The patient has poor dentition. Buccal membranes are normal. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male. The chest diameters are normally proportioned. The abdomen is slightly protuberant. Lymph nodes in the suprACLAVICULAR, axillary and inguinal regions are not palpable.

The back is remarkable for lividity. The arms are remarkable for cyanotic nail beds. The legs are unremarkable. There is fecal material on the posterior upper legs bilaterally. The genitalia are normal circumcised male for the age.

The following evidence of medical intervention is present: There is an endotracheal retractor in the patient's mouth. There is EKG leads on the right and left shoulders approximate in the area of the clavicles. There is an EKG lead on the right abdomen just parallel to the umbilicus.

The following marks and scars are present: No marks or scars were seen.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 1.5 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. Both pleural cavities contain no fluid.

The pericardial sac contains no fluid. No rib fractures are noted.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains no fluid. There are no adhesions.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 420 gm (normal male 270-360)

Patient Name: COOK, CHARLES LEE

Patient Location: AUTOPSY

Room/Bed:

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Continued....

Page: 3

Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

Patient Name: COOK, CHARLES LEE

Age: 54 YRS DOB: 11/02/57 Sex: M Race: C

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GROSS DESCRIPTION:

and is normal in shape, slightly increased in size. The pericardium is normal. There is approximately 90% of the surface area of the heart covered with epicardial fat. The heart has a general appearance and texture consistent with decomposition. The heart is examined by transverse serial slicing. The remaining myocardium is normal. The endocardium is normal. The left ventricular wall is 1.5 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 12.5 cm (normal 12-13 cm), pulmonic valve 8.5 cm (normal 8.5-9.0 cm), mitral valve 11.6 cm (normal 10.5-11.0 cm), and aortic valve 8.4 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries reveal moderate atherosclerotic disease with approximately 60% occlusion of the left anterior descending artery located about 4 cm from the origin. There is no evidence of hemorrhage or thrombosis. The aorta exhibits approximately 20% of the surface area with atherosclerosis located mostly below the level of the renal arteries. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is normal, and the vocal cords are normal. The tracheal mucosa is normal.

Lungs: The right lung weighs 1070 gm (normal male 435), and the left 880 gm (normal male 385). The pleural surfaces are smooth and contain anthracotic pigment bilaterally. The left lung is inflated with formalin before sectioning. The bronchial and vascular trees are normal. The hilar nodes are normal. The lung parenchyma is purple and smooth with fine porosity. Both lungs show edema and congestion.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal. The esophagus is firmly anchored to the diaphragm.

Tongue: The tongue has a finely granular surface with no coating.

Stomach and duodenum: The stomach contains 20 ml of chyme which is dark green and smooth. The mucosa is normal.

Patient Name: COOK, CHARLES LEE

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 02/17/12 - 1310

Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

Patient Name: COOK, CHARLES LEE

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GROSS DESCRIPTION:

The duodenal mucosa is normal.

Pancreas: The pancreas has a normal conformation. It is tan-yellow, normally lobulated. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains 30 ml of dark green bile with no stones. The mucosa is dark green and smooth. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1350 gm (normal male 1400-1900). The liver surface is smooth and homogeneous. The liver is serially sliced to reveal a homogeneous lobular pattern. The cut surface is dark green and smooth without focal abnormality. The liver has a general appearance of decomposition.

Small Bowel: The serosa has no adhesions. The bowel is normal throughout. The lumen contains semi-liquid material. The mucosa is normal. The small bowel has a general appearance of decomposition.

Large bowel: The serosa has no adhesions. The lumen contains feces. The mucosa is normal. The large bowel has a general appearance of decomposition.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal. There is fecal material coming from the anus.

Reticulo-Endothelial System: Spleen: The spleen weighs 138.5 gm (normal 125-195 gm). It is normal in shape, size, density and color.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 140 gm and the left 160 gm (normal male 125-170 gm). The capsules strip with ease to reveal dark red cortical surfaces. Serial slicing reveals well demarcated cortico-medullary junctions. The cortices are 0.5 cm thick; the medullas 1.1 cm thick. Perihilar adipose tissue is increased. The kidneys have a general appearance of decomposition.

Patient Name: COOK, CHARLES LEE

Patient Location: AUTOPSY

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Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

Patient Name: COOK, CHARLES LEE

Age: 54 YRS DOB: 11/02/57 Sex: M Race: C

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Autopsy No.: AU-11-00166

GROSS DESCRIPTION:

Ureters: The ureters are normal throughout their length, measuring 0.3 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is normal. The trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces without distinct architecture. The seminal vesicles are normal.

Testes: The right testis weighs 25 gm, and the left 22.9 gm (normal 20-25 gm). The tunicae albugineae are tan-white, smooth and glistening. The cut surfaces are soft and tan-yellow, with tubules which string with ease.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 24.2 gm (normal 10-22 gm), and is red-brown, bosselated and glistening. The cut surface is homogeneous, translucent, red-brown.

Parathyroids: The parathyroids could not be identified.

Adrenal glands: The right adrenal gland weighs 10.4 gm and the left 13.1 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1670 gm (normal male 1200-1400). The gyri and sulci display a normal pattern without edema or atrophy. The leptomeninges show no atherosclerosis. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, uncus or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Blood and vitreous samples were retained for potential further testing. Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

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08/15/11

Patient Name: COOK, CHARLES LEE

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Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00166

MICROSCOPIC DESCRIPTION:

All slides H & E unless stated otherwise. Autolysis means post mortem decomposition compromised the assessment.

Vertebrae, slide 1: 60-70% cellularity; thin trabeculae; normal mixture of erythroid precursors, myeloid precursors and megakaryocytes

Adrenal, slide 2: No pathologic change

Testis, slide 3: Active spermatogenesis; no pathologic change

Pancreas, slide 4: No pathologic change

Thyroid, slide 5: No pathologic change

Liver, slide 6: Severe autolysis, otherwise no pathologic change

Lung, left, slide 7: moderate edema; post mortem bacterial overgrowth; no thromboemboli or pneumonia noted

Lung, right, slide 8: moderate to severe edema; multifocal areas of hemorrhage; no thromboemboli or pneumonia noted

Kidney, right, slide 9: Autolysis, otherwise no pathologic change

Kidney, left, slide 10: Autolysis, otherwise no pathologic change

Heart, subendocardium, slide 11: thickened and fibrotic chordae tendineae; no evidence of acute ischemic change

Heart, right, slide 12: No pathologic change

Heart, left, anterior, slide 13: myocyte hypertrophy; no evidence of acute ischemic change

Heart, left, lateral, slide 14: small focal collection of lymphocytes in epicardium; no evidence of acute ischemic change

Heart, left, posterior, slide 15: myocyte hypertrophy; no evidence of acute ischemic change

Heart, septum, slide 16: No pathologic change

Spleen, slide 17: Congestion; normal amount of red and white pulp; no evidence of increased neutrophils

Patient Name: COOK, CHARLES LEE

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Patient Account: 20005972-517

Med. Rec. No.: (0150)0145754

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MICROSCOPIC DESCRIPTION:

Ileum, slide 18: Autolysis, otherwise no pathologic change

Colon, slide 19: Autolysis, otherwise no pathologic change

Blood toxicology was positive for Carbamazepine, 2.2 mcg/ml (reporting threshold = 2.0 mcg/ml) and Chlorpromazine, 65 ng/ml (reporting threshold = 50 ng/ml).

Vitreous electrolytes were non-contributory

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09/19/11

Patient Name: COOK, CHARLES LEE

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)0145754
 Patient Name: COOK, CHARLES LEE
 Age: 54 YRS DOB: 11/02/57 Sex: M Race: C
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Pathology Report

FINAL AUTOPSY REPORT

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Autopsy No.: AU-11-00166

CLINICOPATHOLOGIC CORRELATION:

This patient was a 53 year old white TDCJ male inmate found unresponsive in his cell on 8-8-11. The patient was pronounced dead the same day. An autopsy was done two days later on 8-10-11. His past medical history includes schizoaffective disorder, mild mental retardation and hypertriglyceridemia. His medications included chlorpromazine and carbamazepine.

Upon external examination of the body, it was noted that there were greenish areas around the abdomen consistent with decomposition. The kidneys, liver, and lower gastrointestinal tract showed autolytic changes microscopically. The lungs were found to be grossly and microscopically edematous. However, no pneumonias or other infectious processes were found. The spleen was noted to be congested. But again, there was no evidence of any systemic infection, which would manifest as increased neutrophils in the spleen. Toxicology was positive for both of his medications, chlorpromazine and carbamazepine, at recognized therapeutic levels. [Ref. 1]

The patient had multiple cardiovascular findings including cardiomegaly with myocyte hypertrophy seen microscopically, likely secondary to hypertension although that condition is not included in his medical history. There was an area of chordae tendineae fibrosis and the left anterior descending artery had atherosclerosis encompassing 60% of the lumen at maximal obstruction. Both ventricles were dilated and there was atherosclerotic disease of approximately 20% surface area of the aorta, located mostly below the levels of the renal arteries. It is unlikely, however, that any of these cardiovascular findings contributed significantly to the patient's death, given the clinical history.

Since this patient had an elevated body temperature, we felt it prudent to rule out all infectious causes. As stated above, there were no obvious sources of infections that could be identified in the various tissues, such as pneumonia or a kidney infection. No record of any blood, urine, or sputum cultures could be found, precluding direct evidence of infection as the cause of the hyperthermia.

It should be noted that chlorpromazine is a phenothiazine derivative known to interfere with heat dissipation. Afferent neurons into the hypothalamus, which is the body's temperature regulator, are inhibited by phenothiazines. The normal response to increased body temperature is to increase blood flow to the skin. However, this inhibition by phenothiazines leads to decreased cutaneous blood flow. This results in decreased heat dissipation and eventually hyperthermia.

Our conclusion from clinical history and autopsy evidence in this case is that the cause of death is hyperthermia and the manner of death is accidental.
 References.

1. Winek, C.L., et al. Drug and chemical blood-level data 2001. *Forensic Sci.*

Patient Name: COOK, CHARLES LEE
 Patient Location: AUTOPSY
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Continued....

Patient Account: 20005972-517
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Pathology Report

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Autopsy No.: AU-11-00166

CLINICOPATHOLOGIC CORRELATION:

Int. 2001. 122:107-123.

JTK/da
09/19/11

GERALD A. CAMPBELL, M.D., PATHOLOGIST
02/17/12

(Electronic Signature)

Patient Name: COOK, CHARLES LEE
Patient Location: AUTOPSY
Room/Bed: -
Printed Date / Time: 02/17/12 - 1310

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Exhibit G

Luis A. Sanchez, M.D.
Chief Medical Examiner



Main: (713) 796-9292
Fax: (713) 796-6844

Harris County Institute of Forensic Sciences

AUTOPSY REPORT

Case No. ML11-2363

August 10, 2011

ON THE BODY OF

1395315

Michael David Martone
Texas Department of Corrections
Huntsville, Texas

CAUSE OF DEATH: Hyperthermia

CONTRIBUTORY CONDITION: Hypertensive and atherosclerotic
cardiovascular disease

MANNER OF DEATH: Accident

DATE OF DEATH: August 8, 2011

Brandy Shattuck, M.D.
Forensic Pathology Fellow

11/7/11

MMDDYY

Reviewed by:

RECEIVED

NOV 10 2011 Cm

COPIED AND SENT

Merrill O. Hines III, M.D.
Assistant Medical Examiner

4/8/11

MMDDYY

ML11-2363

-2-

POSTMORTEM EXAMINATION ON THE BODY OF

Michael David Martone
Texas Department of Corrections
Huntsville, Texas

HISTORY: This 57 year old white man was transported to Memorial Hermann Texas Medical Center Hospital, via Life Flight, arriving at 9:31 p.m. on August 8, 2011, and was pronounced dead at 10:22 p.m. the same day.

AUTOPSY: The autopsy is performed at the Harris County Institute of Forensic Sciences by Forensic Pathology Fellow Brandy Shattuck, M.D., under the supervision of Assistant Medical Examiner Merrill O. Hines III, M.D., pursuant to Article 49.25, Texas Code of Criminal Procedure, beginning at 9:45 a.m. on August 10, 2011.

EXTERNAL APPEARANCE: The body is that of a normally developed, obese man clad in white shorts and white underwear. Within the white body bag are a green blanket and a white blanket.

The body weighs 300 pounds, is 75 inches in length, and appears compatible with the reported age of 57 years. Rigor mortis is not developed in the upper and lower extremities, neck, or jaw. Fixed red-purple lividity is posterior. The body is cool secondary to refrigeration.

The scalp hair is brown intermixed with gray and approximately 1/2 inch in length. There is no facial hair. The irides are brown. The corneae are clear, the conjunctivae are congested, and the sclerae are congested. There are no petechiae. The external auditory canals, nares, and oral cavity are free of foreign material. Purge fluid is in the oral cavity. The nasal septum is palpably intact. The lips are without injury. The lower teeth are natural. The upper teeth are absent.

Examination of the neck reveals no evidence of injury. The abdomen is protuberant.

The extremities have symmetric musculature with no hesitation scars or needle tracks.

Michael David Martone

ML11-2363

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The external genitalia are those of an adult male with descended testicles. The posterior torso is symmetric.

IDENTIFYING MARKS AND SCARS: There are no scars. Multiple tattoos are present: on the right forearm, a Harley-Davidson logo and dragon; on the right upper arm, a dragon; on the left chest, the phrase "BROWN EYED LADY"; on the left arm, a skull with the name "ROXANNE" underneath; on the left forearm, the word "OUTLAW"; on the left wrist, a flower; on the right leg, a cat; on the right chest, an unidentified symbol; and on the left chest, a flower.

EVIDENCE OF THERAPEUTIC INTERVENTION: An endotracheal tube is positioned appropriately in the mouth. An intravenous catheter is on the posterior aspect of the right hand. Multiple electrocardiogram adhesive electrode pads are on the anterior chest and torso. Defibrillator pads are on the anterior right chest and lateral left chest. A bandage is in the right antecubital fossa overlying a needle puncture mark with associated ecchymosis.

EVIDENCE OF INJURY: A punctate wound is on the right anterior ankle.

INTERNAL EXAMINATION:

BODY CAVITIES: No adhesions are in any of the body cavities. No abnormal collections of fluids are within the body cavities. All internal organs are in the normal anatomic position. The subcutaneous fat layer of the abdominal wall is 3 inches thick.

HEAD (CENTRAL NERVOUS SYSTEM): The subscalp tissues are free of contusions. The calvaria are unremarkable. The dura mater and falx cerebri are intact. There is no epidural, subdural, or subarachnoid hemorrhage. The 1575 gram brain is normal in shape. The leptomeninges are thin and delicate. The cerebral hemispheres are symmetrical. The structures at the base of the brain, including cranial nerves and blood vessels, are intact. The cerebral cortical ribbon is well-demarcated from the white matter. The deep nuclei and ventricles have the standard configuration with no lesions. Parasagittal views of the cerebellum and transverse views of the brainstem are unremarkable.

NECK: The strap muscles of the neck are without hemorrhage. The tongue has a single 4 millimeter focus of hemorrhage in the deep musculature, without overlying

Michael David Martone

ML11-2363

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mucosal injury. The hyoid bone and thyroid and cricoid cartilages are intact. The laryngeal mucosa is tan and glistening with no edema. The epiglottis is thin without edema. The atlanto-occipital articulation is stable. No cervical fractures are palpated.

CARDIOVASCULAR SYSTEM: The 550 gram heart has a smooth, glistening epicardial surface with a moderate amount of epicardial fat. The coronary artery system is normally distributed, has patent ostia and a right-dominant distribution. A yellow eccentric atherosclerotic plaque produces approximately 80-90 percent stenosis of the distal left anterior descending coronary artery. The circumflex and right coronary arteries are patent. The myocardium is red-brown, without pallor or fibrosis. The muscle is diffusely soft. The atrial and ventricular septa are intact. The wall thickness of the left ventricle is 1.7 centimeters, the right ventricle 0.3 centimeter, and the septum 1.7 centimeters. The chambers of the heart are not dilated. The endocardial surfaces are smooth and without hemorrhage. The four cardiac valves are thin, freely mobile, and measure as follows: tricuspid valve 13.5 centimeters, pulmonic valve 8.2 centimeters, mitral valve 11.0 centimeters, and aortic valve 7.5 centimeters.

The aorta and its major branches arise normally and follow their usual distribution, with scattered calcific atherosclerosis throughout. The venae cavae and their major tributaries return to the heart in their usual distribution and are free of thrombi.

RESPIRATORY SYSTEM: The 1200 gram right lung and the 1125 gram left lung have normal lobation. The pleural surfaces are smooth and shiny, with abundant anthracotic pigment deposition. The parenchyma is edematous and congested, without masses or hemorrhage. Cut surfaces exude copious amounts of serosanguineous fluid. The bronchi are unremarkable. The vasculature is without thromboemboli.

HEPATOBILIARY SYSTEM: The 1475 gram liver has a smooth, glistening intact capsule covering a dark red-brown, spongy parenchyma, without focal lesions or visible or palpable fibrosis.

The gallbladder contains greater than 30 milliliters of green-brown, viscous bile; the mucosa is velvety with yellow flecks. The extrahepatic biliary tree is patent, without evidence of calculi.

Michael David Martone

ML11-2363

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ALIMENTARY SYSTEM: The esophagus is lined by gray-white, smooth mucosa. The gastric mucosa exhibits the usual rugal folds and the lumen contains approximately 100 milliliters of red, thin fluid with no alcoholic aromatic odor, granular material or intact pills. The small intestines, colon, and appendix are unremarkable. The pancreas has a pink-tan lobulated appearance and the ducts are clear.

GENITOURINARY SYSTEM: The renal capsules are smooth, thin, and semi-transparent. The underlying cortical surfaces are smooth and pale tan. The cortices are sharply delineated from the medullary pyramids, which are red-purple to tan and unremarkable. The calyces, pelvis, and ureters are unremarkable. The right kidney weighs 225 grams and the left kidney weighs 250 grams.

The urinary bladder has no urine; the mucosa is pink-white and congested. The testes, prostate gland, and seminal vesicles are unremarkable.

RETICULOENDOTHELIAL SYSTEM: The 275 gram spleen has a smooth, intact capsule covering dark red-purple, soft parenchyma; the white pulp is grossly unremarkable. The regional lymph nodes are not enlarged.

ENDOCRINE SYSTEM: The thyroid gland has a normal shape and size with a uniform red-brown parenchyma. The parathyroid glands are inconspicuous. The adrenal cortices are golden yellow and uniformly thin while the medullae are thin and gray. The pituitary gland is unremarkable.

MUSCULOSKELETAL SYSTEM: The vertebrae, clavicles, sternum, ribs, and pelvis are without fracture or developmental abnormality. The musculature is normally distributed; a single 1.6 centimeter focus of intramuscular hemorrhage is in the right forearm near the wrist. The diaphragm is intact.

TOXICOLOGY: Blood, vitreous fluid, urine, bile, stomach contents, liver and brain are submitted.

HISTOLOGY: Representative sections of the heart, lungs, liver, kidney, pancreas, spleen, thyroid, adrenal, subcutaneous right arm hemorrhage, and brain are submitted.

MICROBIOLOGY: Heart blood is submitted for aerobic and anaerobic cultures.

Michael David Martone
ML11-2363
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PATHOLOGIC DIAGNOSES

- I. Hyperthermia
 - A. History of weakness and light-headedness per nursing visit on August 8, 2011
 - B. Witnessed collapse in unit, per report
 - C. Wide complex tachycardia and hypotensive with progression to PEA, per EMS run sheet
 - D. Bladder temperature of 106.5, per medical records
 - E. Unit maximum temperature of 105.3 per Huntsville unit temperature log
- II. Hypertensive and atherosclerotic cardiovascular disease
 - A. Cardiomegaly with concentric left ventricular hypertrophy
 - B. Myocyte hypertrophy with associated myocardial fibrosis
 - C. 80 percent stenosis, left anterior descending coronary artery
 - D. Nephro- and arteriolosclerosis
- III. Pulmonary anthracosis with emphysema
- IV. Clinical history of seizure disorder treated with Dilantin
- V. Clinical history of depression treated with nortriptyline
- VI. Early decomposition
- VII. Ancillary Studies
 - A. Microbiology, non-contributory
 1. Blood cultures: Clostridium sordellii consistent with putrefaction
 - B. Toxicology, non-contributory
 1. Postmortem toxicology
 - a. Ethanol of 0.03 g/dL in heart blood consistent with early decomposition; refer to attached toxicology report
 - b. Prescribed medications in postmortem blood sample; refer to attached toxicology report
 2. Vitreous electrolytes
 - a. Non-contributory; elevated potassium consistent with early decomposition; no evidence of dehydration in postmortem sample

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES
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HOUSTON, TEXAS 77054-2001

Brandy Shattuck, M.D.
Forensic Pathology Fellow

ML11-2363

MICROSCOPIC EXAMINATION

LIVER - Autolysis with background fibrosis.

KIDNEY - Sclerotic glomeruli, arteriolosclerosis, nephrosclerosis.

BRAIN - Perivascular clearing with associated pigment.

LUNGS - Atelectasis, congestion, anthracosis, airspace enlargement with alveolar septal destruction.

HEART - Myocyte hypertrophy with associated interstitial and perivascular fibrosis, bacteria without associated inflammation.

PANCREAS - Autolysis with associated fat necrosis.

THYROID - No histopathologic abnormality.

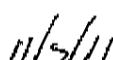
ADRENAL - No histopathologic abnormality.

SPLEEN - No histopathologic abnormality.

SKIN AND SUBCUTANEOUS HEMORRHAGE - Hyperkeratotic epidermis with underlying intramuscular hemorrhage without associated inflammation.

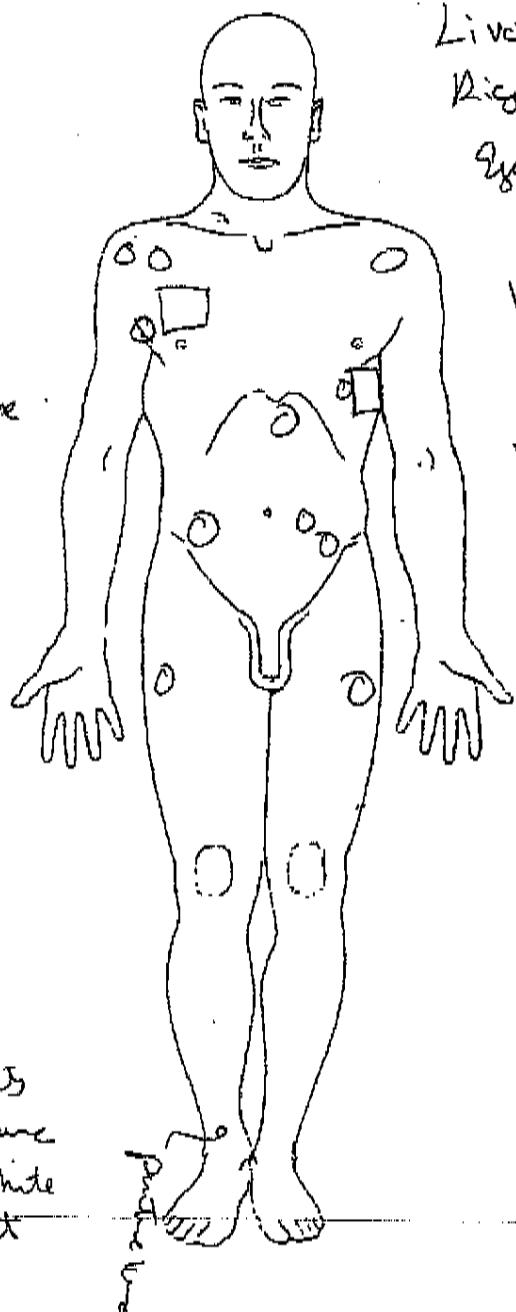


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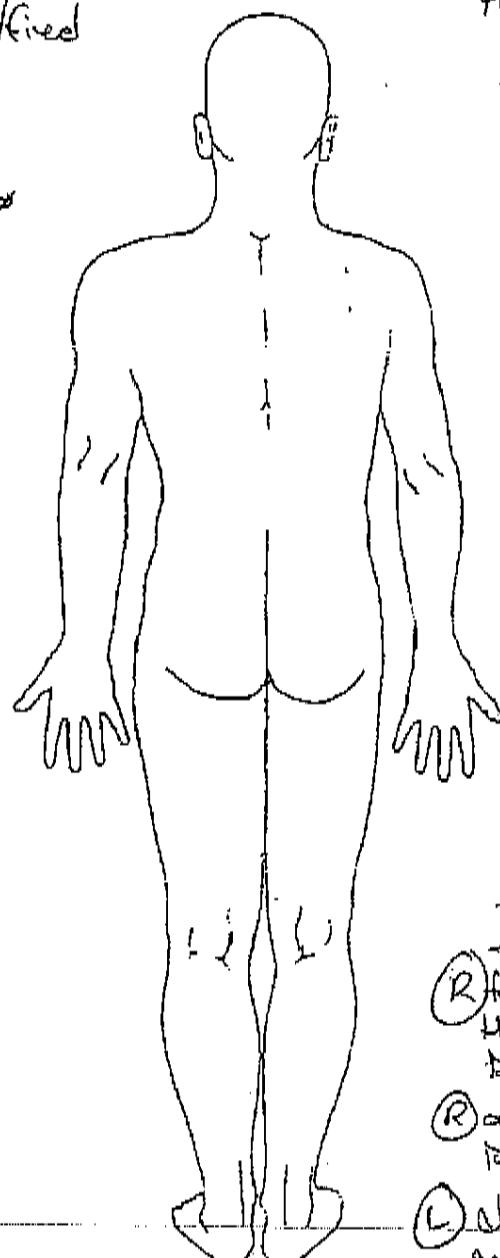


MMDDYY

OFFICE OF THE MEDICAL EXAMINER OF HARRIS COUNTY
 JOSEPH A. JACHIMCZYK FORENSIC CENTER
 1885 OLD SPANISH TRAIL
 HOUSTON, TEXAS 77054-2098

CASE NO: MLI-2363DECEDENT'S NAME: Marine, MichaelDOCTOR'S SIGNATURE: [Signature]HepETFoleyCath. pack
in pantsR handIVR pants/brake
bandage

White pants
 White unders
 Cream & white
 blanket

Liver - post fixedRigor SEyes Brown
 Cryptotarsus
 PetechiaeHair
 Brown/long
 Yr. old
 Nails intact

Hep ID
L wrist
me ID L
wrist

Tattoo

(R) forearm
 Hand
 Dragon

(R) arm
 Dragon

(L) chest
 Brown Eagle logo

(L) arm
 Skull
 Rose and

(L) forearm
 Outline

(R) wrist
 Star

Page 1 of 1

Not to scale

(L) leg & cat
(R) chest
(L) left finger
 nail

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES

1885 Old Spanish Trail

Houston, Texas 77054-2001

Phone: 713-796-6830 Fax: 713-796-6838

LABORATORY REPORT

September 22, 2011

LABORATORY NUMBER: ML11-2363



Deceased: MICHAEL DAVID MARTONE

Submitted By:

Brandy Shattuck, M.D.

Forensic Pathology Fellow

Harris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, TX 77054

Agency Number: ML11-2363

Submission Date: August 10, 2011

Specimen: Blood (heart)

Analyte	Result	Analytical Method
Ethanol	0.03 g/dL	Headspace GC
Nortriptyline	Presumptive positive	GC/MS

Specimen: Vitreous Humor

Analyte	Result	Analytical Method
Chloride	104 mEq/L	Ion Selective Electrode
Creatinine	0.9 mg/dL	Spectrophotometric
Glucose	21 mg/dL	Spectrophotometric
Potassium	12.0 mEq/L	Ion Selective Electrode
Sodium	139 mEq/L	Ion Selective Electrode
Urea Nitrogen	11 mg/dL	Spectrophotometric

Specimen: Bile

Analyte	Result	Analytical Method
Ethanol, Methanol, Isopropanol, Acetone	None Detected	Headspace GC

Specimen: Blood (heart)

Analyte	Result	Analytical Method
7-aminocloiazepam	None Detected	LC/MS/MS
Acetone, Methanol, Isopropanol	None Detected	Headspace GC
Alprazolam	None Detected	LC/MS/MS
Amphetamine	None Detected	Immunoassay
Barbiturates	None Detected	Immunoassay
Clonazepam	None Detected	LC/MS/MS
Cocaine Metabolite	None Detected	LC/MS/MS
Desalkylflurazepam	None Detected	Immunoassay
Diazepam	None Detected	LC/MS/MS
Lorazepam	None Detected	LC/MS/MS
Marijuana Metabolite	None Detected	LC/MS/MS
Methadone	None Detected	Immunoassay
Methamphetamine	None Detected	Immunoassay
Nordiazepam	None Detected	LC/MS/MS

Medical Examiner's Initial (JL)

Unless otherwise requested, toxicology specimens will be discarded one year after date of receipt.
This Laboratory is Accredited by ASCLD/LAB-International and ABFT.

LABORATORY NUMBER: ML11-2363

DATE: September 22, 2011

Specimen: Blood (heart)

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Opiates	None Detected	Immunoassay
Other Standard Basic Drugs	None Detected	GC/MS
Oxazepam	None Detected	LC/MS/MS
Phencyclidine	None Detected	Immunoassay
Ternazepam	None Detected	LC/MS/MS
Triazolam	None Detected	LC/MS/MS

Specimen: Vitreous Humor

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Ethanol, Methanol, Isopropanol, Acetone	None Detected	Headspace GC
Ketones	None Detected	Color Test

INSTITUTE OF FORENSIC SCIENCES

SEP 22 2011

RECEIVED
RECORDS CUSTODIAN*F. Guale*

Fessessework Guale, DVM, D-ABVT, FTS-ABFT
Assistant Chief Toxicologist
September 20, 2011

Ashraf Mozayani

Ashraf Mozayani, Ph.D., D-ABFT
Chief Toxicologist
September 22, 2011

Medical Examiner's Initial

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MS 15 9/11 2011-2011

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES

1885 Old Spanish Trail

Houston, Texas 77054-2001

Phone: 713-796-6830 Fax: 713-796-6838

LABORATORY SUPPLEMENTAL REPORT

October 24, 2011

LABORATORY NUMBER: ML11-2363



Decedent: MICHAEL DAVID MARTONE

Submitted By:

Brandy Shattuck, M.D.
Forensic Pathology FellowHarris County Institute of Forensic Sciences
1885 Old Spanish Trail
Houston, TX 77054

Agency Number: ML11-2363

Submission Date: August 10, 2011

Specimen: Blood (heart)

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Nortriptyline	1.1 mg/L	GC/MS
Phenytoin	6.2 mg/L	GC/MS

Specimen: Stomach Contents

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Nortriptyline	3.0 mg/L	GC/MS

Specimen: Blood (heart)

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Amitriptyline	None Detected	GC/MS

Specimen: Stomach Contents

<u>Analyte</u>	<u>Result</u>	<u>Analytical Method</u>
Amitriptyline	None Detected	GC/MS

HARRIS COUNTY INSTITUTE OF FORENSIC SCIENCES

OCT 25 2011

RECEIVED
RECORDS CUSTODIAN MBLynn DeCuirLynn DeCuir, B.S., T.C. (N.R.C.C.), FTS-ABFT
Toxicologist
October 22, 2011Jeff WalterscheidJeff Walterscheid, Ph.D., D-ABFT
Assistant Chief Toxicologist
October 24, 2011Medical Examiner's Initial BDUnless otherwise requested, toxicology specimens will be discarded one year after date of receipt.
This Laboratory is Accredited by ASCLD/LAB-International and ABFT.

Exhibit H

Patient Account: 20005972-517
 Med. Rec. No.: (0150)221390N
 Patient Name: WEBB, ROBERT ALLEN
 Age: 51 YRS DOB: 02/11/61 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/09/11 0858
 Copies to:

UTMB
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 Galveston, Texas 77555-0543
 (409) 772-1238
 Fax (409) 772-5663
 Pathology Report

1569761

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/4/2011 05:05 Date/Time of Autopsy: 8/9/2011
 Pathologist/Resident: CAMPBELL/XU Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

- I. Body as a whole: History of exposure to high ambient temperature (the unit afternoon temperature, 97.5 deg.F), sudden unexpected death, and status post cardiopulmonary resuscitation. C1,2
- A. Heart: Hypertrophy, mild (weight, 400 gm) A3
- B. Coronary artery, LAD: Myocardial bridging (length, 2 cm; 2.5 cm from origin) A3
- C. Coronary artery, LAD: Mild atherosclerosis A3
- D. Blood, post-mortem heart: Toxicologic evidence of citalopram level consistent with toxicity (1100 ng/mL) A3
- E. Lungs: Congestion (weight, right, 800 gm, left, 680 gm) A3
- F. Lungs: Focal hemorrhage and edema A3
- G. Lung, bilateral: Emphysema A3
- H. Aorta, infra-renal: Mild atherosclerosis A3
- I. Ribs: No evidence of fractures A5
- II. Other findings:
 - B. Liver: Chronic hepatitis with focal activity A4
 - C. Pelvic wall, right lateral: Surgical prosthesis (plastic mesh), probably for repair of inguinal hernia A5

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FEB 27 2012 Cm

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: WEBB, ROBERT ALLEN
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 02/17/12 - 1311

Page: 1

Continued....

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00165

CLINICAL SUMMARY:

The decedent was a 50-year-old Caucasian male inmate with a past medical history of Hepatitis C (positive for HCV antibody by serology), esophageal reflux (caustic lye ingestion at age of 6 years), adjustment disorder with mixed anxiety and depression, and right cheek subcutaneous mass. He smoked 2 ppd for 30 years and quit 5 years ago. He consumed alcohol 6.0 oz per week, 12 can(s) of beer per week, and quit 5 years ago. On 3/1/2010, he had an office visit at UTMB for a right cheek mass (2 cm) slowly growing for 1 year, associated with occasional pain. He reported a 10 lb weight loss for months due to reduced intake from acid reflux. On 3/26/2010, he underwent fine needle aspiration of the cheek mass which showed acellular keratin consistent with an epidermal cyst.

The patient's current medications included: Thorazine (chlorpromazine), Celexa (citalopram), and Omeprazole. 8/2/2011, the patient's EKG showed ventricular tachycardia and two hour cardiopulmonary resuscitation (CPR) was performed. On 8/4/2011 at 0315, the patient was found by a correctional officer lying unresponsive on a mattress which was on the cell floor. CPR was initiated, and the EKG showed ventricular tachycardia. (The date printed on the EKG strip was 8/2/2011. The OIG investigator verified the date/time printed from the device was not correct. It should be 8/4/2011). The patient's skin was warm and moist. No body temperature was taken (The temperature in the unit was 97.5 deg. F at noon on 8/4/2011). The patient's vital signs were unable to be obtained. He was intubated and attempted IV therapy was unsuccessful. AED was applied and EKG monitor showed asystole. He was pronounced dead at 0505 on 8/4/2011. A complete autopsy was performed on 8/9/2011.

YX /da
09/02/11

Patient Name: WEBB, ROBERT ALLEN

Patient Location: AUTOPSY

Room/Bed:

Printed Date / Time: 02/17/12 - 1311

Page: 2

Continued....

Patient Account: 20005972-517

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by left toe ID tag as "Webb, Robert Allen", is a well nourished, well developed, white male, measuring 178 cm in length, and weighing approximately 179 lbs according to recent medical records. The general appearance is consistent with the reported age of 50 years. The body is unclad. Rigor mortis is present in the arms and legs and there is fixed lividity on the dorsal surface. The head is normocephalic with gray hair.

The irides are brown with unequal pupils right side measuring 0.4 cm, the left side 0.3 cm in diameter. The corneas are clear, the conjunctivae are slightly congested, and the sclerae are pale with no jaundice. The nares are patent with no exudate. There are no upper teeth and the right lower teeth are absent. Buccal membranes are normal with no lesions. No mass is identified on the face. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male with sparse hair over the lower legs. The chest diameters are normally proportioned. The abdomen is flat. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable.

The back is unremarkable. The arms and legs are unremarkable. The genitalia are normal male for the age.

The following evidence of medical intervention is present: Two EKG leads on the right upper chest.

The following marks and scars are present: There are two abrasions on the middle of left face about 2.5 cm away from the nose. The abrasions measure 0.5 cm and 1.5 cm in diameter. One abrasion is found on the left lower chest, measuring 3.5 x 2.5 cm in size. There are two abrasions identified on the left elbow laterally, measuring 0.5 and 1.5 cm in diameter. There are multiple tattoos on the body: 1. A tattoo is seen on the left upper arm laterally. Another tattoo is found on the left forearm laterally. There are four healed and linear scars on this tattoo measuring 3 cm to 14 cm in length. 2. A tattoo is seen on the right upper chest. 3. There is a big tattoo is seen around the right upper arm. 4. There is a tattoo of two hearts on the right forearm dorsally and two linear well healed scars are found on this tattoo, measuring 7 and 12 cm in length. 5. A tattoo is found on the dorsal surface of right hand. There are multiple linear scars on the left index finger measuring 2 to 3 cm in length.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 3 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The lungs approach each other in front of the

Patient Name: WEBB, ROBERT ALLEN

Patient Location: AUTOPSY

Room/Bed:

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Continued....

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Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted : 08/09/11 0858

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00165

GROSS DESCRIPTION:

heart. The left pleural cavity contains no fluid, and the right 60 ml of bloody fluid.

The pericardial sac contains 10 ml of clear fluid. No ribs are fractured.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains no fluid. There are no peritoneal adhesions.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 400 gm (normal male 270-360). The pericardium is smooth and glistening. There is moderate amount of epicardial fat. The left and right coronary ostia are identified in their normal locations. The heart is examined by transverse serial slicing of four sections from apex and then opening following the flow of blood. The remaining myocardium is homogeneous red-brown and no scars present. The endocardium is normal. The left ventricular wall is 1.5 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 12 cm (normal 12-13 cm), pulmonic valve 6 cm (normal 8.5-9.0 cm), mitral valve 11.5 cm (normal 10.5-11.0 cm), and aortic valve 7.7 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries reveal mild atherosclerotic plaques with up to 10% occlusion of the LAD located 1 cm from the origin. There is no evidence of hemorrhage or rupture of the plaques. There is myocardial bridging measuring 2 cm in length, 2.5 cm from the origin. The infrarenal aortic segment exhibits 10% surface area involved with plaques. The aorta exhibits less than 5% surface area involved with plaques. The celiac, superior and inferior mesenteric, renal and iliac arteries are unremarkable with minimal atherosclerosis. The bilateral, iliac arteries exhibit about 10% surface area with plaques. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is pink-red, and the vocal cords are normal with no lesions. The tracheal mucosa is normal.

Lungs: Palmar edema is visible as frothy fluid admixed in the bronchi. The right lung weighs 800 gm (normal male 435), and the left 680 gm (normal male

Patient Name: WEBB, ROBERT ALLEN

Patient Location: AUTOPSY

Room/Bed:

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Continued....

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00165

GROSS DESCRIPTION:

385). The pleural surfaces with moderate amount of carbon deposition. The evidence of emphysema is seen on both of the lungs. Lividity is present on the dorsal surface. The right lung is inflated with formalin before sectioning. The bronchial and vascular trees are normal. The hilar nodes are normal. The lung parenchyma is dark red with no obvious consolidation.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is gray-red and no obvious erosions or strictures are identified. No esophageal varices are identified.

Tongue: The tongue has a finely granular surface with no coating.

Stomach and duodenum: The stomach contains about 30 ml of gray-green fluid. The mucosa is normal.

The duodenal mucosa is normal.

Pancreas: The pancreas has a normal conformation. It is gray-green, normally lobulated and firm in consistency. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains about 30 ml of green bile and no stones are identified. The mucosa is gray and lividity. The wall measures up to 1 mm thick, and is unremarkable. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1150 gm (normal male 1400-1900). The liver surface is smooth and homogeneous. Glisson's capsule is transparent and glistening. The liver is serially sliced to reveal a homogeneous lobular pattern. The cut surface is gray-pink without focal abnormality.

Small Bowel: The serosa is smooth and transparent with no adhesions. The bowel is normal throughout. The lumen contains gray-tan fluid. The mucosa is normal.

Large bowel: The serosa is smooth, transparent with no adhesions. The lumen contains well formed stool. The mucosa is normal.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal.

Reticulo-Endothelial System: Spleen: The spleen weighs 290 gm (normal 125-195 gm). It is normal in shape, size, density and color. The cut surface is soft and red-purple.

Patient Name: WEBB, ROBERT ALLEN
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Continued....

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Pathology Report

FINAL AUTOPSY REPORT

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Autopsy No.: AU-11-00165

GROSS DESCRIPTION:

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 130 gm and the left 140 gm (normal male 125-170 gm). The capsules strip with ease to reveal tan-pink cortical surfaces. The cut surface reveals demarcated cortico-medullary junctions. The pelvis and calyces are normal. The renal pelvic mucosa is normal.

Ureters: The ureters are normal throughout their length, measuring 0.4 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is dilated with no hemorrhage. The trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces without distinct architecture. The seminal vesicles are normal.

Testes: The right testis weighs 26.1 gm, and the left 22.7 gm (normal 20-25 gm). The tunicae albugineae are tan-white, smooth and glistening. The cut surfaces are soft and tan-yellow, with no lesions.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 15.6 gm (normal 10-22 gm), and is red-brown, bosselated and glistening. The cut surface is homogeneous, translucent, red-brown. No lesions are identified.

Parathyroids: Several golden-brown, soft fragments of tissue are collected as possible parathyroids.

Adrenal glands: The right adrenal gland weighs 7.1 gm and the left 8.5 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position. Serial slicing in the transverse plane reveals 1 mm thick firm golden yellow cortices, with gray soft medullae with no lesions.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1340 gm (normal male 1200-1400). The gyri and sulci display a normal pattern without edema or atrophy. The leptomeninges are unremarkable. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, unci or

Patient Name: WEBB, ROBERT ALLEN
 Patient Location: AUTOPSY
 Room/Bed:
 Printed Date / Time: 02/17/12 - 1311

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Continued....

Patient Account: 20005972-517

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Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

GROSS DESCRIPTION:

molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Blood was submitted for toxicology tests and a vitreous sample was submitted for electrolyte analysis and osmolarity test (results from the latter not yet available - will be reported as an addendum). Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

Toxicology Results:

Blood drawn postmortem from heart was submitted for toxicologic analysis to Aegis Sciences Corporation, Nashville, TN, for the following tests:

41150 - Chlorpheniramine; 41168 - Citalopram (Celexa)

Results are as follows:

Drug Class	Result	Quantitation	Reporting Threshold
Chlorpheniramine	NONE DETECTED		1 ng/mL
Citalopram	POSITIVE	1100 ng/mL	1 ng/mL

XX /da
08/11/11

Patient Name: WEBB, ROBERT ALLEN
Patient Location: AUTOPSY

Room/Bed:

Printed Date / Time: 02/17/12 - 1311

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Continued....

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MICROSCOPIC DESCRIPTION:

Heart, right and left ventricle, Slides 15-19, (5 H&E):
 In the posterior wall of left ventricle, there is focal subendocardial mild patchy interstitial fibrosis. A few wavy fibers are in the septum. There are no fibrosis scars or thrombi in the left and right ventricle.

Lung, left, Slides 10 and 11 (2 H&E):

The architecture is preserved and there is focal pleural fibrosis. The parenchyma demonstrates diffuse congestion and focal hemorrhage. There is edema in the left lower lobe. No thrombus is noted.

Lung, right, Slides 12-14 (3 H&E):

The architecture is preserved and demonstrates congestion. There is focal hemorrhage. Mild emphysema is noted in right upper and middle lobe. No thrombus is noted.

Kidney, bilateral, Slides 5 and 6, (2 H&E):

There is autolysis of the tissue which prevents detecting early acute tubular necrosis. There is multifocal interstitial fibrosis with minimal lymphocytes infiltration. There are a few complete sclerotic glomeruli.

Adrenal gland, Slides 1 and 2, (2 H&E):

There is severe autolysis but the architecture is preserved.

Liver, Slide 4, (1 H&E):

There is mild steatosis. Lymphocytes infiltration in the portal triads is suggestive of lymphocytic triaditis. There is focal lobular invasion of lymphocytes. Focal bridging fibrosis is suggestive of early stage of cirrhosis, which indicates chronic hepatitis with focal activity.

Spleen, Slide 21, (1 H&E):

There is severe congestion. The red pulp is expanded due to congestion and the white pulp is atrophic.

Pancreas, Slide 22, (1 H&E):

There is severe autolysis but normal architecture without pathologic change.

Thyroid, Slide 3, (1 H&E):

There is no pathologic change.

Parathyroid, Slide 23, (1 H&E):

One piece of parathyroid gland is identified and there is no pathologic change.

Testes, Slides 1 and 2, (2 H&E):

There is active spermatogenesis and it is appropriate for given age.

Patient Name: WEBB, ROBERT ALLEN
 Patient Location: AUTOPSY
 Room/Bed:
 Printed Date / Time: 02/17/12 - 1311

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Continued....

Patient Account: 20005972-517
Med. Rec. No.: (0150)221390N
Patient Name: WEBB, ROBERT ALLEN
Age: 51 YRS DOB: 02/11/61 Sex: M Race: C
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/09/11 0858
Copies to:

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

MICROSCOPIC DESCRIPTION:

Prostate, Slide 9, (1 H&E):
No pathologic change is noted.

Urinary bladder, Slide 9, (1 H&E):
There is autolysis. No pathologic change is noted.

Tongue, Slide 20, (1 H&E):
No pathologic change is noted.

Esophagus, Slide 7, (1 H&E):
There is mucosal autolysis but otherwise no pathologic change.

Stomach, Slide 7, (1 H&E):
There is mucosal autolysis but otherwise no pathologic change.

Gallbladder, Slide 8, (1 H&E):
There is mucosal autolysis with no pathologic change.

Ileum, Slide 8, (1 H&E):
There is mucosal autolysis and submucosal lymphoid hyperplasia.

Sigmoid colon, Slide 8 (1 H&E):
There is mucosal autolysis with no pathologic change.

Bone marrow, Slide 25, (1 H&E):
Cellularity is 70%. Myeloid, erythroid, and thrombocytic lineages are identified. The trabecular bone is normal.

YX /da
09/02/11

Patient Name: WEBB, ROBERT ALLEN
Patient Location: AUTOPSY
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Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)221390N

Patient Name: WEBB, ROBERT ALLEN

Age: 51 YRS DOB: 02/11/61 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 0858

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

CLINICOPATHOLOGIC CORRELATION:

The decedent was a 50-year-old Caucasian male inmate with a past medical history of Hepatitis C (positive for HCV antibody by serology), esophageal reflux (caustic lye ingestion at age of 6 years), adjustment disorder with mixed anxiety and depression, and right cheek subcutaneous mass. The patient's current medications included: Thorazine (chlorpromazine), Celexa (citalopram), and Omeprazole. On 8/2/2011, the patient's EKG showed ventricular tachycardia and two hour cardiopulmonary resuscitation (CPR) was performed. On 8/4/2011 at 0315, the patient was found unresponsive in his cell, and resuscitation attempts were unsuccessful. A complete autopsy was performed on 8/9/2011.

At autopsy, the major organs showed advanced decomposition grossly and severe autolysis microscopically. The aorta and the coronary arteries exhibited mild atherosclerosis. The left anterior descending branch exhibited myocardial bridging, measuring 2 cm in length, beginning at 2.5 cm from the origin. The heart demonstrated mild left ventricular hypertrophy. Both lungs were congested and had focal hemorrhage and edema. The right lung showed mild emphysema. The liver revealed chronic hepatitis with focal activity.

According to this patient's clinical history and autopsy findings, environmental hyperthermia related heat stroke is a consideration. Heat stroke (HS) is a serious and potentially life-threatening condition defined as a core body temperature greater than 40.6 C. Two forms of HS are recognized, classic heat stroke, usually occurring in very young or elderly persons, and exertional heat stroke, more common in physically active individuals. An elevated body temperature and neurologic dysfunction are necessary but not sufficient to diagnose HS. Associated clinical manifestations such as extreme fatigue; hot dry skin or heavy perspiration; nausea; vomiting; diarrhea; disorientation to person, place, or time; dizziness; uncoordinated movements; and reddened face are frequently observed. Potential complications related to severe HS are acute renal failure, disseminated intravascular coagulation, rhabdomyolysis, acute respiratory distress syndrome, acid-base disorders, and electrolyte disturbances. Long-term neurologic sequelae (varying degrees of irreversible brain injury) occur in approximately 20% of patients. The prognosis is optimal when HS is diagnosed early and management with cooling measures and fluid resuscitation and electrolyte replacement begins promptly. The prognosis is poorest when treatment is delayed more than 2 hours.

A heat wave is defined as three or more consecutive days with air temperatures greater than 32.2 C. Exposure to excessive heat may cause illness, as heat directly induces tissue injury with severity dependent upon the critical thermal maximum (ie, the level and duration of core heating). The critical thermal maximum in humans is a body temperature of 41.6 C to 42 C for between 45 minutes and 8 hours. At extreme body temperatures (eg, 49 -50 C), all cellular structures are destroyed and cellular necrosis occurs in less than 5 minutes.

Patient Name: WEBB, ROBERT ALLEN

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Patient Account: 20005972-517

Med. Rec. No.: (0150)221390N

Patient Name: WEBB, ROBERT ALLEN

Age: 51 YRS DOB: 02/11/61 Sex: M Race: C

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Date / Time Admitted : 08/09/11 0858

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00165

CLINICOPATHOLOGIC CORRELATION:

The precise incidence of HS is unknown for many reasons. First, in the United States, heat-related death is not a reportable condition in any state. Second, the definition of HS varies, resulting in under reporting of HS cases. Third, many heat-related illnesses and deaths are unrecognized as such and are not reported. Therefore, the reported incidence of HS in the United States varies from 17.6 to 26.5/100,000. Why some cases progress to HS and others do not is unclear, but it appears that genetic polymorphisms may determine susceptibility; the likely candidate genes include those that encode cytokines, coagulation proteins, and heat shock proteins. Mortality rates for HS range from 10% to 70%, depending on the severity and age of the patient. The greatest numbers of deaths occur when treatment is delayed for more than 2 hours.

This patient had several risk factors of HS: lack of air conditioning, chronic illness, and use of Thorazine (chlorpromazine). Studies have showed Thorazine may impair thermoregulation. The cardiovascular system is frequently compromised in HS. The patient had ventricular tachycardia before his death. Confirmation of dehydration was attempted via vitreous humor electrolyte analysis, but prolonged postmortem intervals and putrefaction complicated the assessment.

Another issue that must be addressed in this case is the abnormally high level of citalopram (Celexa) in the post mortem blood obtained from the heart (1100 ng/mL, see toxicology report). This level is in the range reported to be in the toxic and/or lethal in several studies. [3-5] Potential reasons for a toxic level of this drug include overdose, changes in metabolism due to disease, and hemoconcentration due to dehydration. Clinical manifestations of citalopram toxicity include prolonged QT interval in the cardiac cycle and torsades de pointes (TdP), which is a potentially fatal type of ventricular arrhythmia. [6] The possibility of post-mortem redistribution of drugs, especially into heart blood must also be considered, however. This effect could artifactually considerably elevate the measured level over the actual level of the drug in circulating blood prior to death. A study of this effect reported only one case with measured citalopram levels, and in that case the ratio of the drug levels between blood drawn from femoral vein and heart was nearly unity (i.e. minimal redistribution effect). [7] Femoral blood could not be obtained in this case.

Based on the history of exposure to high ambient temperature and advanced organ autolysis, environmental-induced hyperthermia is likely a major factor contributing to death in this case. However, the measured toxic level of citalopram cannot be ruled out as a significant (and possibly major) factor. In either case, the manner of death must be considered accidental, as no evidence of suicidal intent has been presented.

Patient Name: WEBB, ROBERT ALLEN

Patient Location: AUTOPSY

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Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)221390N

Patient Name: WEBB, ROBERT ALLEN

Age: 51 YRS DOB: 02/11/61 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/09/11 0858

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FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00165

CLINICOPATHOLOGIC CORRELATION:

References:

1. Yeo, T. Heat Stroke, A Comprehensive Review, AACN Clinical Issues, 2004; 15 (2): 280-293
2. Prevention and treatment of heat injury. Med Lett Drugs Ther. 2003; 45:58-60.
3. Jonasson, B., Saldeen, T. Citalopram in fatal poisoning cases. Forensic Sci Int. 2002; 126:1-6.
4. Segura, L.J., Bravo, B. Postmortem citalopram concentrations: alone or along with other compounds. J Forensic Sci. 2004; 49:814-819.
5. Winek, C.L., et al. Drug and chemical blood-level data 2001. Forensic Sci Int. 2001; 122:107-123.
6. Chan, A., et al. Drug-induced QT prolongation and torsades de pointes: evaluation of a QT nomogram. QJ Med. 2007; 100:609-615.
7. Rodda, K.E., Drummer, O.H. The redistribution of selected psychiatric drugs in post-mortem cases. Forensic Sci Int. 2006; 164:235-239.

VX /da
09/02/11

GERALD A. CAMPBELL, M.D., PATHOLOGIST

(Electronic Signature)

02/17/12

Patient Name: WEBB, ROBERT ALLEN

Patient Location: AUTOPSY

Room/Bed:

Printed Date / Time: 02/17/12 - 1311

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END OF REPORT

10/04/2012 21:20

PD013013

(A)

Exhibit I

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 yrs DOB: 12/26/64 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/04/11 1105
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Pathology Report

680515

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/3/2011 12:10 Date/Time of Autopsy: 8/4/2011
 Pathologist/Resident: RAMPY/KOSHY Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

FINAL AUTOPSY DIAGNOSIS

I.	Body as a whole: clinical history of hyperthermia (105.6 degrees Fahrenheit) due to high environmental temperature	C1
A.	Organs in situ: Marked, generalized autolysis	A4
B.	Lungs: Pulmonary edema and intra-alveolar hemorrhage, patchy	A3
C.	Heart: Cardiomegaly (410 g)	A4
1.	Heart: Contraction band necrosis, focal areas	A4
D.	Brain: Edema	A4
II.	Body as a whole: Clinical history of hypothyroidism	
A.	Thyroid: Hashimoto thyroiditis	A3
III.	Other findings:	
A.	Spleen: Congestive splenomegaly (270 g)	A5
B.	Liver: Hepatomegaly (2020 g)	A5
C.	Liver: Marked macro- and microvesicular steatosis	A5
D.	Prostate: Chronic prostatitis, multifocal	A5
E.	Pituitary gland: Microadenoma	A5

RECEIVED

MR 1000 (cm)

COPIED AND SENT

***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted : 08/04/11 1105
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

CLINICAL SUMMARY:

The decedent was a 46-year-old male TDCJ inmate, with a past medical history of hypertension, hyperlipidemia, hypothyroidism and schizophrenia who was found unresponsive in his cell on 08/03/2011. His cell mate reported that the deceased was rocking while standing and sitting before he became unresponsive. He then was transported to the infirmary where a body temperature was measured at 105.6 degrees Fahrenheit. Ice packs and wet towels were placed on the patient to lower his body temperature. The prison doctor ordered the patient to be transferred to the hospital and en route, the decedent developed cardiac arrest. Cardiopulmonary resuscitation was initiated, yet no pulse was regained. The patient died on 08/03/2011. A complete autopsy was performed on 08/04/2011.

JTK/da
 08/08/11

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed:
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Page: 2

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by a left ankle identification band as "Thomas Meyers", is a well-developed, well-nourished white male, measuring 188 cm in body length and weighing approximately 225 lbs according to recent medical records. The general appearance is consistent with the reported age of 46 years. Rigor mortis is present in the arms and legs bilaterally and there is fixed lividity with numerous Tardieu spots on the posterior surfaces. The head is normocephalic with short (2.5 cm) dark brown/black hair.

The irides are brown with equal pupils measuring 0.3 cm in diameter. The corneas are clouded, the conjunctivae are minimally congested and the sclerae are white. The nares are patent with scant thin, watery blood-tinged exudate bilaterally. Dentition is adequate. The buccal membranes are pale. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male. The chest diameters are normally proportioned. The abdomen is protuberant. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable.

The back is unremarkable. The left arm is remarkable for numerous patches of petechiae and purpuric hemorrhage distributed primarily along the proximal anterior surfaces. One such prominent patch is at the left antecubital fossa and likely reflects an intravenous access site. Otherwise, the extremities appear unremarkable. The genitalia are normal circumcised male for the age.

The following evidence of medical intervention is present: An endotracheal tube is in place, secured with a blue plastic collar. A defibrillator pad is positioned at the right rostral chest just caudal to the clavicle. Another defibrillator pad is positioned at the lateral aspect of left lower quadrant of the abdomen. A blood pressure cuff is positioned at the mid-shaft of the left arm. Eleven EKG leads are positioned along the rostral aspect of the proximal arms and shoulders bilaterally as well as along the lateral aspect of the left thorax, abdomen and hip. A single lumen IV line is positioned at the left lateral neck.

The following marks, scars and tattoos are present: An 8 cm linear, longitudinal scar is positioned approximately mid-shaft, along the anterior aspect of the right thigh. A 3 cm oblique, linear scar is positioned approximately 5 cm caudal to the right tibial tubercle. A tattoo of the text "Thomas" is positioned approximately 8 cm rostral to the right nipple.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 4 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The right and left pleural cavities each contain

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 03/14/12 - 1359

Continued....

Page: 3

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

GROSS DESCRIPTION:

20 ml of clear red fluid.

The pericardial sac contains no fluid. Ribs 1, 2, 5 and 6 on the right and 1, 3, 5 and 6 on the left are fractured anteriorly (most likely associated with cardiopulmonary resuscitation).

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains 20 ml of clear red fluid. There are no peritoneal adhesions.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 410 gm (normal male 270-360) and is notably soft. The rostral, anterior aspect of the pericardium exhibits superficial blood and blood clot (approximately 12 x 8 cm), consistent with the distribution of the previously described anterior rib fractures. Approximately 80% of the heart is covered with epicardial fat. The heart is examined by transverse serial slicing of the ventricles, then opening following the flow of blood. The myocardium is homogeneous red-brown. The endocardium is translucent and smooth. The left ventricular wall is 1.6 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 11 cm (normal 12-13 cm), pulmonic valve 6 cm (normal 8.5-9.0 cm), mitral valve 11.5 cm (normal 10.5-11.0 cm), and aortic valve 8.3 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries reveal no significant atherosclerosis. The aorta exhibits approximately 10% surface area involved with ulceration and complicated plaques positioned primarily caudal to the level of the renal arteries. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior venae cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is pink/red and smooth with no lesions and the vocal cords appear normal. The tracheal mucosa is moderately congested, tan/pink and otherwise unremarkable.

Lungs: The right lung weighs 710 gm (normal male 435), and the left 830 gm (normal male 385). The pleural surfaces are smooth, pink and essentially

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 03/14/12 - 1359

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
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 Attending Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

GROSS DESCRIPTION:

translucent throughout. The left lung is inflated with formalin before sectioning. The bronchial and vascular trees are normal. The hilar nodes are unremarkable. The lung parenchyma is red/purple, with fine porosity and oozes thin fluid with sectioning.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is tan/pink and unremarkable.

Tongue: The tongue has a finely granular surface with no coatings.

Stomach and duodenum: The stomach contains 30 ml of dark brown, viscous chyme. The wall displays attenuated rugae and the mucosa is tan without lesions. The duodenum has a tan, glistening mucosa with normal plical pattern without lesions.

Pancreas: The pancreas has a normal conformation of head and tail. The parenchyma is tan, normally lobulated and soft. The pancreatic duct is patent. The pancreas cuts without a gritty sensation.

Biliary tract: The gallbladder serosa is gray/green and glistening. The gallbladder contains 30 ml of mildly viscous black bile, with no calculi. The mucosa is pink/red and velvety. The cystic duct, hepatic duct, and common duct are normal and bile is expressed freely from the ampulla on compression of the gallbladder.

Liver: The liver weighs 2020 gm (normal male 1400-1900). The liver surface is smooth and glistening. Glisson's capsule is essentially translucent. The liver is serially sliced to reveal a homogeneous lobular pattern with dark red/brown parenchyma and no gross lesions.

Small Bowel: The serosa is smooth and semi-translucent with no adhesions. The bowel is normal caliber throughout and the lumen contains semiliquid tan material. The mucosa is tan and glistening with normal plications. The bowel wall reveals no lesions.

Large bowel: The serosa is smooth, tan and glistening with no adhesions. The mucosa is tan and glistening throughout with no gross lesions. The lumen contains soft, tan/brown fecal material. The appendix is grossly normal.

Rectum and anus: No lesions are noted and no abnormalities of the anal opening are present.

Reticulo-Endothelial System: Spleen: The spleen weighs 270 gm (normal 125-195 gm). It is semi-firm throughout and exhibits granular dark red parenchymal cut surfaces.

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
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 Printed Date / Time: 03/14/12 - 1359

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Patient Account: 20005972-517
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Pathology Report

FINAL AUTOPSY REPORT

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Autopsy No.: AU-11-00160

GROSS DESCRIPTION:

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are of normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 180 gm and the left 170 gm (normal male 125-170 gm). The capsules strip with ease to reveal essentially smooth, red cortical surfaces. Serial slicing reveals well-demarcated cortico-medullary junctions. The right and left cortices are 0.7 and 1.1 cm thick respectively. The pelvis and calyces are normal. The renal pelvic mucosa is normal. Perihilar adipose tissue is increased.

Ureters: The ureters are of normal caliber (0.3 maximal external diameter) throughout their length with tan smooth glistening mucosa. No periureteral fibrosis is noted. The distal ureters are probe-patent into the bladder.

Bladder: The bladder is minimally thickened with mild trabeculation. The mucosa is white/tan and the trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces without distinct architecture. The seminal vesicles are normal.

Testes: The right testis weighs 26.7 gm, and the left 22.4 gm (normal 20-25 gm). The tunica albuginea are white/tan, smooth and glistening. The cut surfaces reveal tan/yellow, soft parenchyma with tubules which string with ease.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 22.3 gm (normal 10-22 gm), is red/brown, bosselated and glistening. Cut surfaces reveal homogeneous, red/brown semi-translucent, parenchyma throughout.

Parathyroids: Parathyroids were not identified.

Adrenal glands: The right adrenal gland weighs 7.7 gm and the left 7.8 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position. Serial slicing in the transverse plane reveals markedly soft golden cortices with grey medullae.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

GROSS DESCRIPTION:

are normal. The brain weighs 1650 gm (normal male 1200-1400). The gyri and sulci display a normal pattern with minimal apparent cerebral edema. The leptomeninges are unremarkable. The circle of Willis, basilar and vertebral arteries show minimal atherosclerosis. No indentation/herniation of the cingulate gyri, unci or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

JTK/da
 08/09/11

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
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Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

MICROSCOPIC DESCRIPTION:

PANCREAS, Slide 1 (1 H&E): Autolysis with postmortem bacterial overgrowth. Otherwise no pathologic change

ADRENAL GLAND, Slide 2 (1 H&E): Autolysis.

THYROID, Slide 3 (1 H&E): Lymphocytic infiltration of the stroma with multifocal oxyphilic change of follicular epithelium. The lymphoid tissue is distributed within and around lobules with occasional large follicles. Plasma cells, histiocytes and rare intrafollicular multinucleated giant cells are observed.

TESTIS, Slide 4 (1 H&E): Mild attenuation of spermatogenesis, appropriate for age. No pathologic change

VERTEBRA, Slide 5 (1 H&E): Normal myeloid/erythroid ratio with 60% cellularity and no pathologic change. change

LIVER, Slide 6 (1 H&E): Autolysis. Marked, diffuse, mixed micro- and macrovesicular steatosis with rare, thin-walled, cyst-like cavities of uncertain significance. Postmortem bacterial overgrowth.

SPLEEN, Slide 7 (1 H&E): Autolysis. No pathologic change.

LUNGS, Slides 8 and 9 (2 H&E): Marked autolysis. Congestion with patchy, widely distributed areas of edema and intra-alveolar hemorrhage within sections of left lung. Postmortem bacterial overgrowth.

HEART, SLIDES 10 through 14 (5 H&E): Autolysis. Rare contraction band necrosis observed in widely scattered individual myocytes within the left ventricle and septum. Postmortem bacterial overgrowth.

KIDNEYS, Slides 15 and 16 (2 H&E): Autolysis. No pathologic change.

ILEUM, Slide 17 (1 H&E): Autolysis.

JEJUNUM, Slide 18 (1 H&E): Autolysis. No pathologic change.

COLON, Slide 19 (1 H&E): Autolysis. No pathologic change.

ESOPHAGUS, Slide 20 (1 H&E): Fibromembranous and muscular tissue fragment; no mucosa identified.

PROSTATE, Slides 21 through 23 (3 H&E): Multi-focal sites of lymphoplasmacytic inflammatory infiltrates are observed within the stroma and surrounding

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 03/14/12 - 1359

Continued....

Patient Account: 20005972-517
Med. Rec. No.: (0150)185744Q
Patient Name: Meyers, Thomas
Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/04/11 1105
Copies to:

UTMB
University of Texas Medical Branch
Galveston, Texas 77555-0543
(409) 772-1238
Fax (409) 772-5683
Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

MICROSCOPIC DESCRIPTION:
adjacent glands.

JTK/da
09/19/11

Patient Name: Meyers, Thomas
Patient Location: AUTOPSY
Room/Bed: -
Printed Date / Time: 03/14/12 - 1359

Continued....

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

CLINICOPATHOLOGIC CORRELATION:

The patient was a 46-year-old TDCJ male inmate, with a past medical history of hypertension, hyperlipidemia, hypothyroidism and schizophrenia who was found unresponsive in his cell on 08/03/2011. Body temperature (axillary) measured during acute medical response was 105.6 degrees Fahrenheit. No information obtained as part of the medical record or TDCJ Investigator Report indicates ambient temperature of the Coffield Unit for the evening of 08/03/2011, yet, historical data (derived from AccuWeather.com) indicates that the high temperature for Tennessee Colony, TX on this date was 108 degrees Fahrenheit. Clinical suspicion of heat-related mortality was also suggested in the TDCJ Investigator's Report.

Thorough external examination, in-situ examination of organs and microscopy effectively rule out trauma with regard to this patient. The primary gross and microscopic finding at autopsy is profound autolysis of the tissues for most organs examined. Such advanced tissue degradation for a routine autopsy is consistent with and is most certainly derived from, at least in part, an elevated body temperature at the time of death. Whereas marked autolysis does indeed limit the derivation of many fine details associated with histopathologic interpretation, most important considered diagnoses such as significant atherosclerotic coronary artery disease, frank myocardial infarction, pneumonia or other acute infections are effectively ruled out.

As suggested by the National Association of Medical Examiners: Position Paper: Criteria for the Diagnosis of Heat-Related Deaths (1996), for instances where the measured antemortem body temperature at the time of collapse was ≥ 105 degrees Fahrenheit, the cause of death should be certified as heat stroke or hyperthermia. With a documented axillary temperature of 105.6 degrees Fahrenheit, this meets the suggested criteria. Moreover, the core body temperature was certainly more elevated than that noted from an axillary site. Additional convergent autopsy findings support the diagnosis of hyperthermia. The patient did have a documented history of hypothyroidism, and upon histopathologic examination exhibited diagnostic features of Hashimoto thyroiditis. Moreover, whereas there was no significant coronary artery disease or evidence of frank myocardial infarction, histopathologic examination of the heart does reveal numerous widely distributed individual myocytes in the left ventricle and interventricular septum with contraction bands and early coagulative necrosis. The lungs were both notably heavy (right 710 g, left 830 g) and upon microscopic evaluation revealed widely distributed foci of pulmonary edema as well as similar foci of intra-alveolar hemorrhage (left \geq right). The brain also exhibited cerebral edema, yet no significant focal lesions.

It has been proposed that the physiologic adaptations "to hypothyroidism may hinder appropriate response during heat stress" (Siegler, 1998). The author reported the autopsy findings of a 31-year-old female with no known history of

Patient Name: Meyers, Thomas
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 03/14/12 - 1359

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Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)185744Q
 Patient Name: Meyers, Thomas
 Age: 47 YRS DOB: 12/26/64 Sex: M Race: C
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Pathology Report

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Autopsy Office (409)772-2858

Autopsy No.: AU-11-00160

CLINICOPATHOLOGIC CORRELATION:

thyroid disease. The autopsy findings for the reported patient were significant for the post-mortem diagnosis of Hashimoto thyroiditis. Additionally, the remainder of the reported autopsy results were quite similar to the current patient as well as for many general instances of heat stroke or hyperthermia, with pulmonary edema and diffuse hemorrhage and presence of contraction band necrosis within the myocardium. Finally, the medication list for the decedent included, risperidone, pravastatin, synthroid and vasotec. In the setting of extreme environmental heat, dehydration is always an underlying risk factor for heat-related illness. Dehydration may also increase the effective levels of certain medications through an associated reduction in renal clearance. In particular, risperidone and other psychiatric medications may disturb the capacity for brain regulation of body temperature homeostasis. As such, these medications may indirectly contribute to a state of hyperthermia due to temperature dysregulation. The contributory effects, if any, of hyperthyroidism and/or risperidone therapy with regard to the presentation of hyperthermia for the decedent may not be established.

In summary, with the exclusion of all other considerations for mortality, the cause of death for this 46-year-old male is hyperthermia. The manner of death is accident.

REFERENCES:

Donoghue, ER, Graham, MA, Jentzen, JM, Lifschultz, BD, Luke, JL, Mirchandani, HG: Criteria for the Diagnosis of Heat-Related Deaths: National Association of Medical Examiners: Position Paper. The American Journal of Forensic Medicine and Pathology, Vol 18(1), March 1997, 11-14.

Siegler, RW: Fatal Heatstroke in a Young Woman with Previously Undiagnosed Hashimoto's Thyroiditis. Journal of Forensic Sciences Vol 43(6), 1998, 1237-1240.

JTK/da
 09/19/11

BILL A. RAMPY, D.O., PhD

(Electronic Signature)

03/13/12

Patient Name: Meyers, Thomas

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 03/14/12 - 1359

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END OF REPORT

Exhibit J



SOUTHWESTERN
INSTITUTE OF FORENSIC SCIENCES
AT DALLAS



Office of the Medical Examiner
Autopsy Report

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INSTITUTE OF FORENSIC SCIENCES

Case: IFS-11-10161 - ME

172 1640

Decedent: McCollum, Larry Gene 58 years White Male DOB: 04/04/1953

Date of Death: 07/28/2011 (Actual)

Time of Death: 11:35 PM (Actual)

Examination Performed: 07/29/2011 09:30 AM

ORGAN WEIGHTS:

Brain: 1,600 g	Right Lung: 700 g	Right Kidney: 260 g
Heart: 550 g	Left Lung: 500 g	Left Kidney: 280 g
Liver: 2,590 g	Spleen: 250 g	

EXTERNAL EXAMINATION

The body is identified by tags. Photographs and fingerprints are taken.

The body is received nude. No personal effects or jewelry are present on the body.

The body is that of a normally-developed white male which appears consistent with the recorded age of 58 years. When nude, it measures 70 inches in length and weighs 345 pounds. There is good preservation in the absence of embalming. Rigor mortis is present. Lividity is located on the posterior body surfaces and blanches with pressure. The body is room temperature in the presence of minimal refrigeration.

The hairline is receding and there is short gray hair that is cut very close to the scalp. Mustache and beard stubble are on the face. The irides are brown and there are no petechiae of the bulbar or palpebral surface of the conjunctivae. The ears, nose, and lips are unremarkable. The mouth has natural dentition. The neck is without masses or unusual mobility. The chest and back are unremarkable. The abdomen is protuberant. The extremities are symmetric. The external genitalia, perineum, and anus are unremarkable.

A 1 inch area of indentation and red discoloration is on the right side of the forehead.

IDENTIFYING MARKS AND SCARS

A 3 inch linear scar is obliquely oriented on the right side of the abdomen.

A 2 inch linear scar is on the right temporal scalp.

EVIDENCE OF TREATMENT



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SEARCHED

160-111-CMV

SEARCHED AND INDEXED

IFS-11-10161

McCollum, Larry Gene

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- Cardiac monitor pads affixed to the chest
- Intravascular catheter in upper right arm
- Hospital band encircling left wrist
- Foley catheter
- Rectal catheter connected to plastic bag containing fecal material
- Needle puncture surrounded by ecchymosis in the left inguinal region
- Needle punctures in the right inguinal region, with extravasated blood within the soft tissue and musculature surrounding the right inguinal canal

EVIDENCE OF INJURY

A 1/4 inch purple contusion is on the superior aspect of the bridge of the nose.

Reflection of the scalp reveals a 3 cm area of hemorrhage in the left temporalis muscle along the parietal bone. A 1 inch purple contusion with central abrasion is immediately inferior to the left external ear. Deep to this is a 4 cm area of hemorrhage within the underlying soft tissue.

A 2 cm purple contusion is on the left supraclavicular region. A 2 inch purple to yellow contusion is on the right upper abdomen near the subcostal margin. A few purple contusions measuring between 1 and 2 cm each are on the left side of the chest. A 1/2 inch red abrasion is on the front of the proximal left forearm. A 2 inch purple contusion is on the posterior aspect of the left thigh.

INTERNAL EXAMINATION

BODY CAVITIES: Approximately 300 cc of tan clear fluid are within each pleural cavity. The pericardial and peritoneal cavities contain no adhesions or abnormal collections of blood or other fluid.

HEAD: See EVIDENCE OF INJURY. The dura and dural sinuses are unremarkable. There are no epidural, subdural or subarachnoid hemorrhages. The leptomeninges are thin and delicate. The cerebral hemispheres are symmetrical, with flattened gyri and effaced sulci. There is mild notching of the parahippocampal gyri. The cerebellar tonsils are soft; sections reveal friable, tan-red necrotic parenchyma. The cranial nerves and blood vessels are unremarkable. Sections through the brainstem are unremarkable. Sections through the cerebral hemispheres exhibit diffuse blurring of the gray-white matter junctions. There are no hemorrhages in the deep white matter or the basal ganglia. The cerebral ventricles contain no blood. The spinal cord, as viewed from the cranial cavity, is unremarkable.

NECK: The soft tissues and prevertebral fascia are unremarkable. The hyoid bone and laryngeal cartilages are intact. The lumen of the larynx is not obstructed.

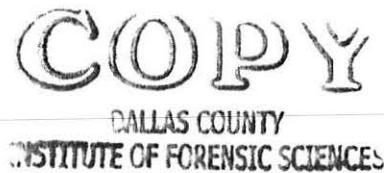
CARDIOVASCULAR SYSTEM: The intimal surface of the abdominal aorta is free of significant atherosclerosis. The aorta and its major branches and the great veins are normally distributed and unremarkable. The pulmonary arteries contain no thromboemboli. The heart is markedly enlarged, with normal contours. The pericardium, epicardium, and endocardium are smooth, glistening, and unremarkable. There are no thrombi in the atria or ventricles. The foramen ovale is closed. The coronary arterial system is free of significant atherosclerosis. The atrial and ventricular septa are intact. The cardiac valves are unremarkable. The myocardium is dark red-brown and firm, and there are no focal



IFS-11-10161

McCollum, Larry Gene

abnormalities.



Page 3 of 6

RESPIRATORY SYSTEM: The upper airway is unobstructed. The laryngeal mucosa is smooth and unremarkable, without petechiae. The pleural surfaces are smooth and glistening. The major bronchi are unremarkable. Sectioning of the lungs discloses a dark red-blue, moderately congested parenchyma.

HEPATOBILIARY SYSTEM: The liver is covered by a smooth, glistening capsule. The parenchyma is dark red-brown and moderately congested. The gallbladder contains approximately 10 cc of dark green bile, and one dark green cholesterol stone measuring approximately 2 inches in greatest dimension.

GASTROINTESTINAL SYSTEM: The tongue is grossly normal both externally and upon sectioning. The esophageal mucosa is gray, smooth, and unremarkable. The stomach is empty. There are no tablets or capsules. The gastric mucosa has normal rugal folds, and there are no ulcers. The small and large intestines are externally unremarkable. The appendix is absent. The pancreas is unremarkable externally and upon sectioning.

GENITOURINARY SYSTEM: The capsules of both kidneys strip with ease to reveal smooth and slightly lobulated surfaces. The cortices are of normal thickness, with well-demarcated corticomedullary junctions. The calyces, pelvis, and ureters are unremarkable. The urinary bladder is empty. The mucosa is gray, smooth, and unremarkable. The prostate gland is unremarkable both externally and upon sectioning.

ENDOCRINE SYSTEM: The thyroid and adrenal glands are unremarkable externally and upon sectioning.

LYMPHORETICULAR SYSTEM: The spleen is covered by a smooth, blue-gray, intact capsule. The parenchyma is dark red. The cervical, hilar, and peritoneal lymph nodes are unremarkable.

MUSCULOSKELETAL SYSTEM: The clavicles, ribs, sternum, pelvis, and vertebral column have no fractures. The diaphragm is intact.

MICROSCOPIC EXAMINATION:

Heart: myocyte hypertrophy; increased interstitial and perivascular fibrosis.

Lung: vascular congestion.

Liver: moderate macrovesicular steatosis, mild focal centrilobular necrosis.

Kidney: No significant pathologic alteration is identified.

Spleen: diffuse hypocellularity with depletion of both the red and white pulp.



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IFS-11-10161

McCollum, Larry Gene

TOXICOLOGY:

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INSTITUTE OF FORENSIC SCIENCES

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Evidence Submitted:

The following items were received by the Laboratory from the Office of the Medical Examiner:

- 004: Biohazard Bag
- 004-001: Blood, femoral - gray top tube
- 004-002: Blood, femoral - gray top tube
- 004-003: Blood, femoral - gray top tube
- 004-004: Blood, femoral - gray top tube
- 004-005: Blood, femoral - red top tube
- 004-006: Vitreous - red top tube
- 004-007: Skeletal muscle - plastic tube

Blood, postmortem

Acid/Neutral Screen (GC/MS)
negative (004-001)

Alcohols/Acetone (GC)
negative (004-002)

Alkaline Quantitation (GC, GC/MS)
negative (004-001)

Opiate Narcotics (GC/MS)
0.107 mg/L morphine (004-002)

Vitreous

Alcohols/Acetone (GC)
negative (004-006)

Opiate Narcotics (GC/MS)
0.046 mg/L morphine (004-006)



IFS-11-10161

McCollum, Larry Gene

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FINDINGS:

1. Hyperthermia

- a. History that the decedent was in a hot environment without air conditioning, and was witnessed to collapse with seizure activity.
- b. History that the decedent presented to the Emergency Department unresponsive, with a body temperature of 109.4 degrees Fahrenheit.
- c. Hospital course complicated by
 - 1. hypoxic-ischemic encephalopathy
 - 2. disseminated intravascular coagulation
 - 3. shock
 - 4. multi-system organ failure
- d. Brain swelling
 - 1. transtentorial herniation
 - 2. cerebellar tonsillar herniation and acute necrosis
 - 3. hypoxic-ischemic encephalopathy

2. History of hypertension

- a. Cardiac hypertrophy (heart weight = 550 grams)
- b. History of treatment with hydrochlorthiazide

3. Morbid obesity (Body mass index = 49.5)

4. Contusions of scalp and face

5. Subgaleal hemorrhage

6. No significant injuries

CONCLUSIONS:

Based on the autopsy and the history available to me, it is my opinion that Larry Gene McCollum, a 58-year-old white male, died as the result of hyperthermia. The decedent was in a hot environment without air conditioning, and he may have been further predisposed to developing hyperthermia due to morbid obesity and treatment with a diuretic (hydrochlorthiazide) for hypertension.

MANNER OF DEATH: Accident



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IFS-11-10161

McCollum, Larry Gene

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10.26.2011

Keith Pinekard, M.D., Ph.D.
Medical Examiner



Accredited by The National Association of Medical Examiners

Exhibit K

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1726849
 Patient Name: JAMES, KENNETH W
 Age: 52 YRS DOB: 11/25/58 Sex: M
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/17/11 0811
 Copies to:

Race: B

UTMB
University of Texas Medical Branch

Galveston, Texas 77555-0543
 (409) 772-1238
 Fax (409) 772-5683

Pathology Report

72 6849

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00174

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/13/2011 4:16 Date/Time of Autopsy: 8/17/2011
 Pathologist/Resident: WALKER/XU Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole: Clinical history of hyperthermia, hypertension, depression, back injury, and sudden unexpected death, status post unsuccessful cardiopulmonary resuscitation C1,2
 A. Heart: Cardiomegaly (weight 500 g) A3
 B. Heart, ventricle, left: Hypertrophy A3
 C. Heart, left ventricle, posterior wall: focal patchy myocardial necrosis A3
 D. Skeletal muscle: Rhabdomyolysis A3
 E. Coronary arteries: Moderate atherosclerosis A3
 F. Aorta, infrarenal segment: Mild atherosclerosis A3
 1. Left anterior descending artery: 50% stenosis with atherosclerotic plaque, 2.5 cm from origin A3
 2. Left circumflex artery: 50% stenosis with atherosclerotic plaque, 1.8 cm from origin A3
 3. Right coronary artery: 30% stenosis with atherosclerotic plaque, 2.0 cm from the origin A3
 G. Lung, bilateral: Congestion with edema (weight, right 760 g; left 700 g) A3
 H. Lung, right: Aspiration pneumonia A3
 I. Ribs: Fracture with hemorrhage, consistent with cardiopulmonary resuscitation A3
 1. Left 6th rib: Fracture A5

II. Other findings: A5
 A. Adrenal gland, right: Cortical adenoma A5
 B. Prostate: Mild nodular benign hyperplasia A5
 C. Colon, serosa: Fibrotic adhesion A5
 D. Vertebrae, lumbar: Spurs A5
 E. Ileum: Meckel's diverticulum A5

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: JAMES, KENNETH W
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 09/12/11 - 0717

Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1726849
 Patient Name: JAMES, KENNETH W
 Age: 52 YRS DOB: 11/25/58 Sex: M
 Admitting Dr.: OUTSIDE TDCJ
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University of Texas Medical Branch

Galveston, Texas 77555-0543
 (409) 772-1238
 Fax (409) 772-5683

Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00174

CLINICAL SUMMARY:

The decedent was a 52-year-old black male TDCJ inmate with a past medical history of hypertension (BP, 170/107 mmHg), depression, back injury (2002, 2004), and drug abuse (marijuana, cocaine). The list of his medications was: Hydrochlorothiazide, Propranolol, Enalapril, Lisinopril, Cyclobenzaprine (muscle relaxant), Neurontin (Gabapentin), Ultram (opioid analgesic), and Naproxen (nonsteroidal anti-inflammatory drug). On 8/12/2011, he was in clinic for physical examination. He had not been to the pill window to pick up medication since arrival to the Gurney Unit on 8/10/2011. His vital signs were: BP 170/107 mmHg, P 108, R 18, T 98.7. He was treated with Clonidine 0.25 mg at 1155, and his BP went down to 129/74 mmHg with pulse 100 at 1230 on 8/12/2011.

He was found unresponsive with temperature 108 deg F (42.2 deg C) in his cell at 0300 on 8/13/2011. His skin was dry and pale. CPR was initiated, and he was intubated. He was transported to Palestine Regional Medical Center with CPR in progress at 0352. Cardiac monitor showed asystole. CBC at 0357 showed WBC 8.1 x 10³/ l, RBC 5.11 x 10⁶/ l, Hgb 14.9 g/dl, MCV 88.5, and PLT 94 x 10³/ l (PLT clumps). He was given epinephrine and sodium bicarbonate. The patient was unable to be revived and was pronounced dead at 0416 on 8/13/2011.

A complete autopsy was performed on 8/17/2011.

YX /da
 09/08/11

Patient Name: JAMES, KENNETH W
 Patient Location: AUTOPSY
 Room/Bed:
 Printed Date / Time: 09/12/11 - 0717

Continued....

Page: 2

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1726849
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 (409) 772-1238
 Fax (409) 772-5683
Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00174

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by left toe tag as "James, Kenneth", is a well nourished, well developed, black male, measuring 179 cm in length, and weighing approximately 254 lbs according to recent medical records. The general appearance is consistent with the reported age of 52 years. The body is unclothed. Rigor mortis is present in the arms and legs, and there is fixed lividity on the dorsal surface. The head is normocephalic with essentially no scalp hair anteriorly and with short black and gray scalp hair posteriorly.

The irides are brown with equal pupils measuring 0.4 cm in diameter. The corneas are cloudy, the conjunctivae are congested, and the sclerae are slightly congested and edematous. The nares are patent with no exudate. The patient is partially edentulous. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male. The chest diameters are normally proportioned. The abdomen is slightly protuberant. Lymph nodes in the supraclavicular, axillary and inguinal regions are not palpable.

The back is unremarkable. The arms and legs are unremarkable. The genitalia are normal male for the age.

The following evidence of medical intervention is present:

1. There is a nasogastric tube in the right nose
2. An intubation tube is in the mouth with holder around the head
3. There are four EKG leads, two on upper chest and another two on left lateral abdominal wall
4. Two AED pads on the chest
5. There is IV line on the right side of the neck
6. Triple lumen IV catheter in the right groin area
7. There is an intraosseous infusion line on the right lower leg

The following marks and scars are present:

1. A well healed longitudinal linear scar on the middle abdominal wall, measuring 30 cm in length with 1.5 cm in width.
2. A well healed oval scar on the left knee medially measuring 1.5 x 0.5 cm.
3. Another oval shaped well healed scar located on the left lower leg medially, measuring 2 x 1.7 cm.
4. A healed scar on the right upper leg laterally, measuring 5 x 2 cm.
5. Two well healed longitudinal linear scars on the lower back, one 7 cm in length, 1 cm in width and another one 3 cm in length and 1 cm in width.

There are multiple tattoos on the body. Tattoo of letters on the upper front

Patient Name: JAMES, KENNETH W
 Patient Location: AUTOPSY
 Room/Bed:
 Printed Date / Time: 09/12/11 - 0717

Continued....

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Pathology Report

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Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00174

GROSS DESCRIPTION:

chest and the letters are Lurene with two stars on each side; the second tattoo is a design of heart located on the left upper arm laterally; the third tattoo is on the left forearm laterally with the following letters "LEXAS"; the fourth tattoo is naked female upper part of body which is located at right upper arm anteriorly; the sixth tattoo is with the following letters "EBVCK" which is located on the right forearm posteriorly; the seventh tattoo is on the back with the letters "Jims and Mar" which is located on the upper back.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 2.5 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The left pleural cavity contains 200 ml of bloody fluid, and the right contains 70 ml of similar fluid.

The pericardial sac contains approximately 10 ml of clear yellowish fluid.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains no fluid. There are moderate peritoneal adhesions with ascending colon, transverse colon and descending colon adherent to the abdominal wall and to the stomach and mesenteric connective tissue.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 500 gm (normal male 270-360 gm). The pericardium is essentially smooth and glistening with small areas of hemorrhage (possibly due to CPR). There is a moderate amount of epicardial fat. The left and right coronary ostia are identified in the normal locations. The heart is examined by transverse serial slicing of four sections from apex and then opening following the flow of blood. The myocardium is homogeneous red-brown with mottled myocardium in the posterior wall of the left ventricle. The endocardium is normal. The left ventricular wall is 1.5 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.3 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 11.5 cm (normal 12-13 cm), pulmonic valve 8 cm (normal 8.5-9.0 cm), mitral valve 10 cm (normal 10.5-11.0 cm), and aortic valve 8 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries reveal moderate atherosclerosis involving left anterior descending artery with 50% stenosis located 2.5 cm from the origin, left circumflex artery with 50% stenosis located 1.8 cm from

Patient Name: JAMES, KENNETH W
 Patient Location: AUTOPSY
 Room/Bed:
 Printed Date / Time: 09/12/11 - 0717

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1726849
 Patient Name: JAMES, KENNETH W
 Age: 52 YRS DOB: 11/25/58 Sex: M
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted: 08/17/11 0811
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FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00174

GROSS DESCRIPTION:

the origin and right coronary artery with 30% stenosis located 2.0 cm from the origin. The aorta exhibits mild atherosclerosis in the arch and aortic root segments. The infrarenal aortic segment exhibits mild atherosclerosis, with less than 10% surface area involved with plaques. The celiac, superior and inferior mesenteric, and renal arteries are unremarkable with minimal atherosclerosis. The bilateral iliac arteries exhibit mild atherosclerosis. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is normal, and the vocal cords are normal with no lesions. The tracheal mucosa is normal.

Lungs: The right lung weighs 760 gm (normal male 435 gm), and the left 700 gm (normal male 385 gm). The pleural surfaces are smooth and transparent with a moderate amount of carbon deposition. There are subpleural bullae on the pleural surface of right upper lobe. Opacity is present on the dorsal surface. The left lung is inflated with formalin before sectioning. The bronchial and vascular trees are normal. The hilar nodes are normal. The right and left lung parenchyma is dark red with fine porosity, and without consolidation.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal. The esophagus is firmly anchored to the diaphragm.

Tongue: The tongue has a finely granular surface with no coating.

Stomach and duodenum: The stomach contains about 100 ml of bloody dark red fluid. The mucosa is dark red.

The duodenal mucosa is normal.

Pancreas: The pancreas has a normal conformation. It is tan-yellow, normally lobulated and firm in consistency. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains about 15 ml of green bile and with no stones. The mucosa is green and velvety. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1790 gm (normal male 1400-1900 gm). The liver surface is smooth with a tan-pale area. Glisson's capsule is transparent and glistening. The liver is serially sliced to reveal a homogeneous lobular pattern. The cut surface is normal without lesions.

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Small bowel: The serosa is smooth and transparent with no adhesions. The bowel is normal throughout. The lumen contains green-gray digested food stuff. The mucosa is normal.

Large bowel: The serosa is smooth and transparent with adhesions to the peritoneal wall, stomach and mesentery. The lumen contains loosely formed stool. The mucosa is normal.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal.

Reticulo-endothelial System: Spleen: The spleen weighs 120 gm (normal 125-195 gm). It is normal in shape with decreased size. The cut surface is soft and red-purple with no lesions.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are normal.

Spine: Multiple spurs are identified in the lower lumbar spine.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are of normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 160 gm and the left 140 gm (normal male 125-170 gm). The capsules strip with ease to reveal dark red cortical surfaces. The cut surfaces reveal well demarcated cortico-medullary junctions. The pelvis and calyces are normal. The renal pelvic mucosa is normal. Perihilar adipose tissue is moderate.

Ureters: The ureters are normal throughout their length, measuring 4.4 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder mucosa is trabeculated. The trigone is normal. There is a small area of submucosal hemorrhage, measuring 1.5 x 1.0 cm.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces with small nodular architecture. The seminal vesicles are normal.

Testes: The right testis weighs 18.5 gm, and the left 22.3 gm (normal 20-25 gm). The tunica albuginea are tan-white, smooth and glistening. The cut surfaces are soft and tan-yellow, with no lesions.

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GROSS DESCRIPTION:

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 23.8 gm (normal 10-22 gm), and is red-brown, bosselated and glistening. The cut surface is homogeneous, translucent, red-brown with no lesions

Parathyroids: Several brown, soft fragments of tissue are collected as possible parathyroids.

Adrenal glands: The right adrenal gland weighs 8.9 gm and the left 8.5 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position. Serial slicing in the transverse plane reveals 1 mm thick firm golden yellow/brown cortices, with gray soft medullae and one golden yellow nodule in the right adrenal gland measuring 1.7 x 1.5 x 1 cm.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1380 gm (normal male 1200-1400 gm). The gyri and sulci display a normal pattern. The leptomeninges are unremarkable. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, uncus or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Deltoid muscle, psoas muscle and gastrocnemius muscle: The skeletal muscles are grossly normal and samples are collected.

Blood and vitreous samples are collected. Vitreous sample was submitted for analysis of electrolytes and osmolarity measurement. Samples of liver, kidney, heart, lung and spleen were frozen for potential further examination.

YX /da
 08/23/11

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Pathology Report**FINAL AUTOPSY REPORT**

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MICROSCOPIC DESCRIPTION:

Heart, right and left ventricle, Slides 10-15, (6 H&E) (consultation: Dr. Boor for slide 13, posterior wall of left ventricle): In the posterior wall of left ventricle, there is focal contraction-band myocardial necrosis in a pattern of patchy-widespread (not associated with ischemic distribution). Cardiomyocytes of left ventricle exhibit hypertrophy. There is no fibrosis in the left and right ventricle.

Left anterior descending coronary artery, Slide 27, (1 H&E): There is 50% occlusive atherosclerotic plaque.

Left circumflex coronary artery, Slide 28, (1 H&E): There is 50% occlusive atherosclerotic plaque.

Right coronary artery, Slide 29, (1 H&E): There is 30% occlusive atherosclerotic plaque.

Lung, left, Slides 16 and 17 (2 H&E, 1 Von-Kossa, 1 DAPI): The architecture is preserved and demonstrates congestion. In the inner surface of the arterioles and veins, there is a layer of accumulated autolyzed nucleic acids (hematoxylin stained). It is Von-Kossa negative for calcium but DAPI stain positive for nucleic acids which is suggestive of denatured DNA in the vessel. Anthracosis is noted. No inflammation or thrombi are noted.

Lung, right, Slides 18-20 (3 H&E, 1 Acid Fast, 1 GMS and 1 Gram stain): The architecture is preserved and demonstrates congestion with anthracosis. There is focal hemorrhage, fibrinous exudates and macrophages in the alveolar spaces. There is lymphocytic infiltration and foreign body reaction with multinucleated giant cell formation in the right upper lobe suggesting aspiration pneumonia. Acid fast and GMS stains are negative for organisms. Gram stain shows postmortem bacterial growth in the tissue. No thrombus is noted.

Kidneys, bilateral, Slides 3 and 4, (2 H&E): There is severe autolysis, but the general architecture is preserved. There are a few completely sclerotic glomeruli. There is interstitial hemorrhage and intraglomerular hemorrhage. The wall of the arterioles is thickened suggesting arteriosclerosis.

Adrenal glands, Slides 1 and 2, (2 H&E): There is a cortical adenoma in right adrenal gland. There is autolysis but normal architecture without pathologic change in left adrenal gland.

Liver, Slide 5, (1 H&E): There is mild steatosis. Lymphocytic infiltration in the portal triads. A Russell body is noted in the triad.

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Spleen, Slide 6, (1 H&E):
 There is severe congestion. The red pulp is expanded due to congestion, and the white pulp is normal. There is arteriosclerosis.

Pancreas, Slide 7, (1 H&E):
 There is severe autolysis but normal architecture without pathologic change.

Thyroid, Slide 7, (1 H&E):
 There is no pathologic change.

Parathyroid, Slide 25, (1 H&E):
 One piece of parathyroid gland is identified, and there is no pathologic change.

Testes, Slides 1 and 2, (2 H&E):
 There is active spermatogenesis, and it is appropriate for given age.

Prostate, Slide 21, (1 H&E):
 Benign prostatic hyperplasia.

Urinary bladder, Slide 21, (1 H&E):
 There is autolysis. No pathologic change is noted.

Tongue, Slide 8, (1 H&E):
 No pathologic change is noted.

Esophagus, Slide 8, (1 H&E):
 There is mucosal autolysis but otherwise no pathologic change.

Stomach, Slide 8, (1 H&E):
 There is severe autolysis, but the architecture is preserved.

Gallbladder, Slide 9, (1 H&E):
 There is severe autolysis with no pathologic change.

Ileum, Slide 9, (1 H&E):
 There is severe autolysis with no pathologic change.

Colon, Slide 9 (1 H&E):
 There is severe autolysis with no pathologic change.

Bone marrow, Slide 25, (1 H&E):
 Cellularity is 40%. Myeloid, erythroid and thrombocytic lineages are identified.

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MICROSCOPIC DESCRIPTION:

Deltoid muscle, Slide 22, (1 H&E) (consultation: Dr. Campbell):
 Focal hypercontracted and eosinophilic rhabdomyocytes are noted.

Psoas muscle, Slide 23, (1 H&E) (consultation: Dr. Campbell):
 Focal hypercontracted and eosinophilic rhabdomyocytes are noted.

Gastrocnemius muscle, Slide 24, (1 H&E 1 Masson's Trichrome) (consultation:
 Dr. Campbell):
 Focal hypercontracted myocytes, eosinophilic myocytes, and disorganization of
 sarcomeres with loss of cross striations indicating myofiber injury. Masson's
 trichrome stain emphasizes loss of cross striation in necrotic myofibers, with
 fragmentation in focal myofibers.

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FINAL AUTOPSY REPORT

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Autopsy No.: AU-11-00174

CLINICOPATHOLOGIC CORRELATION:

The decedent was a 52-year-old black male TDCJ inmate with a past medical history of hypertension, depression, back injury (2002, 2004), and drug abuse (marijuana, cocaine). The list of his medications was: Hydrochlorothiazide, Propranolol, Enalapril, Lisinopril, Cyclobenzaprine (muscle relaxant), Neurontin (Gabapentin), Ultram (opioid analgesic), and Naproxen (nonsteroidal anti-inflammatory drug, NSIAD). On 8/12/2011, he was treated with Clonidine 0.25 mg at 1155 for BP 170/107 mmHg, and his BP went down to 129/74 mmHg with pulse 100/min at 1230. He was found unresponsive with temperature 108 deg F (42.2 deg C) in his cell at 0300 on 8/13/2011. His skin was dry and pale. CPR was initiated and he was intubated. CBC at 0357 showed WBC 8.1 x 10³/l, RBC 5.11 x 10⁶/l, HGB 14.9 g/dl, MCV 88.5 and Platelet 94 x 10³/l (PLT clumps). He was given epinephrine and sodium bicarbonate. The patient was unable to be revived and was pronounced dead at 0410 on 8/13/2011. A complete autopsy was performed on 8/17/2011.

At autopsy, the aorta revealed mild atherosclerosis, and the coronary arteries exhibited moderate atherosclerosis. The heart demonstrated cardiomegaly and left ventricular hypertrophy. There was focal patchy contraction-band myocardial necrosis in the posterior wall of the left ventricle. Both lungs were congested. Right lung showed focal hemorrhage with aspiration pneumonia. Gastrocnemius muscle demonstrated focal hypercontracted myocytes, eosinophilic myocytes, and disorganization of sarcomeres with loss of cross striation indicating myofiber injury.

Based on this patient's body temperature (42.2 deg C), advanced autolysis of organs, focal patchy myocardial necrosis, rhabdomyolysis, decreased platelet count and no other cause of death. Environmental hyperthermia related heat stroke is considered though toxicology tests and vitreous analysis are still pending. Heat stroke (HS) is a serious and potentially life-threatening condition defined as a core body temperature > 40.6 deg C. Two forms of HS are recognized, classic heat stroke, usually occurring in very young or elderly persons, and exertional heat stroke, more common in physically active individuals. An elevated body temperature and neurologic dysfunction are necessary but not sufficient to diagnose HS. Associated clinical manifestations such as extreme fatigue, hot dry skin or heavy perspiration, nausea, vomiting, diarrhea, disorientation to person, place, or time, dizziness, uncoordinated movements, and reddened face are frequently observed. Potential complications related to severe HS are acute renal failure, disseminated intravascular coagulation, rhabdomyolysis, acute respiratory distress syndrome, acid-base disorders and electrolyte disturbances. Long-term neurologic sequelae (varying degrees of irreversible brain injury) occur in approximately 20% of patients. The prognosis is optimal when HS is diagnosed early and management with cooling measures and fluid resuscitation and electrolyte replacement begins promptly. The prognosis is poorest when treatment is delayed > 2 hours (1).

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CLINICOPATHOLOGIC CORRELATION:

A heat wave is defined as three or more consecutive days of air temperatures > 32.2 deg C. Exposure to excessive heat may cause illness, as heat directly induces tissue injury, the severity of which is dependent upon the critical thermal maximum (i.e., the level and duration of core heating). The critical thermal maximum in humans is a body temperature of 41.6 deg C to 42 deg C for between 45 minutes and 8 hours. At extreme body temperatures (eg, 49 -50 deg C), all cellular structures are destroyed, and cellular necrosis occurs in < 5 minutes (1).

The precise incidence of HS is unknown for many reasons. First, in the United States, heat-related death is not a reportable condition in any state. Second, the definition of HS varies, resulting in underreporting of HS cases. Third, many heat-related illnesses and deaths are unrecognized as such and are not reported. Therefore, the reported incidence of HS in the United States varies from 17.6 to 26.5/100,000. Why some cases progress to HS and others do not is unclear, but it appears that genetic polymorphisms may determine susceptibility; the likely candidate genes include those that encode cytokines, coagulation proteins, and heatshock proteins. Mortality rates for HS range from 10% to 70%, depending on the severity and age of the patient. The greatest numbers of deaths occur when treatment is delayed for >2 hours (1).

This patient had several risk factors of HS: lack of air conditioning, chronic illness, and use of diuretics (Hydrochlorothiazide) and beta blockers (Propranolol). Studies have shown that diuretics and beta blockers may impair thermoregulation (2). In addition, the patient was treated with Clonidine for his hypertension one day before his death. A research group has demonstrated that Clonidine induces hyperthermia in experimental rats at high ambient temperature (3). Confirmation of dehydration was attempted via vitreous humor electrolyte analysis, but the prolonged postmortem interval and putrefaction complicated the assessment.

The cardiovascular system is frequently compromised in HS. The initial response is hyperdynamic, followed by hypotension, tachycardia and tachydysrhythmia (4). There is focal patchy myocardial necrosis in this patient. One study has showed that a subpopulation of HS victims will develop myocardial ischemia (5).

In summary, it is our opinion that the manner of death is natural. The immediate cause of death is most likely environmental hyperthermia-related classic heat stroke though toxicology tests and vitreous humor tests are still pending. Results of the toxicology tests and vitreous humor analysis will be reported as an addendum.

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CLINICOPATHOLOGIC CORRELATION:**References:**

- 1.T. Yeo, Heat Stroke, A comprehensive review, AACN Clinical Issues, 2004; 15 (2): 280-293
- 2.Prevention and treatment of heat injury. Med Lett Drugs Ther. 2003; 45:58-60.
- 3.E. Mogilnicka, V. Klimek, G. Nowak, and A. Czyrak, Clonidine and beta-agonists induce hyperthermia in rats at high ambient temperature. J. Neural Transmission 1985; 63, 223-235
- 4.H. Grogan and PM. Hopkins. Heat stroke: implications for critical care and anesthesia. Br J. Anaesth. 2002;88:700-707.
- 5.J.E. Dematte, K. OMara J. Bueschlein. Near-fatal heat stroke during the 1995 heat wave in Chicago. Ann Intern Med. 1998;129:173-181.

YX /da
 09/08/11

DAVID H. WALKER, M.D., PATHOLOGIST

09/09/11

(Electronic Signature)

Patient Name: **JAMES, KENNETH W**
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Exhibit L

Patient Account: 20005972-517

Med. Rec. No.: (0150)848438Q

Patient Name: **HUDSON, DOUGLAS**

Age: 63 YRS DOB: 10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted : 07/26/11 1158

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FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 7/25/2011 16:56 Date/Time of Autopsy: 7/27/2011
 Pathologist/Resident: ARONSON/KOSHY Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole: Findings consistent with environmental hyperthermia (body temperature of 105 F, environmental temperature noted to be above 100 F) A2, C2

- A. Lungs, bilateral: congestion and edema A4
- 1. Lung, right: Focal early bronchopneumonia A4
- B. Pleural cavities: Pleural effusion (right:150 ml and left: 100 ml) A4
- C. Bronchi: Submucosal hemorrhage, mild A4
- D. Brain, cerebral cortex, hippocampus and cerebellum: Extensive acute ischemic change in neurons (global encephalomalacia) A4
- 1. Brain: Edema A1
- E. Skin, dorsum of feet: Fine petechiae A4
- F. Colon, ascending: Focal areas of mucosal hemorrhage A4
- G. Spleen: Congestion A4
- H. Kidneys, bilateral: Histologic findings consistent with acute tubular necrosis A4

II. Cardiovascular system: History of hypertension A3

- A. Heart: Cardiomegaly due to biventricular hypertrophy (heart weight 570 g) A3
- B. Heart, right coronary artery: atherosclerosis with 75% stenosis of the lumen A3
- C. Heart, left anterior descending artery: atherosclerosis with 75% stenosis of the lumen A3
- D. Heart, left circumflex artery: atherosclerosis with 75% stenosis of the lumen A3

RECEIVED OCT 10 2011 CrA COPIED AND SENT A3

III. Other findings: A5

- A. Thyroid: Thyromegaly, mild (weight = 28 g) A5
- B. Colon, descending: Diverticulosis, mild A5

***TYPE: Anatomic(A) or Clinical(C) Diagnosis.

IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD; 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: **HUDSON, DOUGLAS**Patient Location: **AUTOPSY**

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Patient Account: 20005972-517
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FINAL AUTOPSY DIAGNOSIS

C. Lungs, apical pleura: Fibrosis
D. Liver: Mixed macro/microvesicular steatosis

A5

A5

CAUSE OF DEATH: Complications of environmental hyperthermia (heat stroke)

CONTRIBUTORY FACTORS: Atherosclerotic coronary artery disease

MANNER OF DEATH: Accident

Patient Name: **HUDSON, DOUGLAS**
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Patient Account: 20005972-517

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Fax (409) 772-5683

Pathology Report**FINAL AUTOPSY REPORT**

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

CLINICAL SUMMARY:

The patient was a 62 year old male TDJC inmate with a past medical history of coronary artery disease and paroxysmal ventricular tachycardia. The patient's medication list included amitriptyline, aspirin, and metoprolol. According to medical records, the patient was prescribed amitriptyline on 7-22-11.

On 7/24/2011, he was found to be unconscious, but breathing, in his cell. There is also a report of seizure-like activity but the quality and duration is unknown. His temperature taken at the time was noted to be 105 degrees Fahrenheit and the temperature outside was over 100 degrees Fahrenheit. Fluids were started and ice packs were placed under his armpits and groin. The patient's skin was noted to be pale, hot and dry. The patient then went into supraventricular tachycardia with a rate of 236 beats per minute and was treated with adenosine. The patient was flown to Palestine Regional Medical Center and upon arrival he was noted to be in Pulseless Electrical Activity for 2-4 minutes. The patient was intubated and revived with advanced cardiac life support, placed on pressors, and transferred to the intensive care unit. Laboratory results showed metabolic and respiratory acidosis, mild leukocytosis, coagulopathy, acute renal failure (BUN = 34 mg/dl and creatinine = 2.7 mg/dl) and elevated cardiac enzymes (CK = 601 U/L, troponin I = 1.05 ng/ml, CKMB = 6.5 mg/ml). Chest x-ray showed bilateral upper lobe infiltrates suggestive of pneumonia. The patient remained comatose, his condition did not improve and it was decided to withdraw care. The patient expired on 7-25-11 and an autopsy was done 7-27-11.

JTK/da
07/29/11

Patient Name: **HUDSON, DOUGLAS**
Patient Location: **AUTOPSY**
Room/Bed: -
Printed Date / Time: 10/06/11 - 0724

Continued....

Page: 3

Patient Account: 20005972-517

Med. Rec. No.: (0150)848436Q

Patient Name: **HUDSON, DOUGLAS**

Age: 63 YRS DOB: 09/10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted : 07/26/11 1158

Copies to :

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Pathology Report**FINAL AUTOPSY REPORT**

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00155

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by right wrist ID bracelet as "Douglas Hudson", is a well developed, well nourished, white male, measuring approximately 200 cm in length, and weighing approximately 225 lbs according to recent medical records. The general appearance is consistent with the reported age of 62 years. Rigor mortis is present in the arms and legs and there is fixed lividity on the posterior surface of both arms and legs. The head is normocephalic and the patient is bald.

The irides are blue with equal pupils measuring 0.3 cm in diameter. The corneas are cloudy, the conjunctivae are pale, and the sclerae are white. There is blood coming out of the right nare. Dentition is normal. Buccal membranes are normal. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male. The abdomen is slightly protuberant. Lymph nodes in the suprACLAVICULAR, axillary and inguinal regions are not palpable.

The back is remarkable for lividity on the superior and inferior parts. The arms and legs are unremarkable. The genitalia are normal male for the age.

The following evidence of medical intervention is present: There is an approximately 3 x 3 cm bruise on his sternum. There are medically related needle punctures in both the left and right antecubital fossae. There is IV placement in both of the dorsum of both hands. There is a puncture site on the right lateral portion of the neck.

The following marks and scars are present: There is a tattoo of two hearts connected together on the right bicep area. There is a right ankle ID bracelet as well as a right toe ID tag. There are abrasions on the medial side of both feet. There are petechiae on the dorsal surface of both feet.

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 4.5 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. The left pleural cavity contains 100 ml of clear red fluid, and the right contains 150 ml of clear red fluid.

The pericardial sac contains 10 ml of clear red fluid. Ribs 4 and 5 are fractured on the left and ribs 3,4,5,6, and 7 are fractured on the right.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains no fluid. There are no peritoneal adhesions.

Patient Name: **HUDSON, DOUGLAS**Patient Location: **AUTOPSY**

Room/Bed: -

Printed Date / Time: 10/06/11 - 0724

Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)848436Q

Patient Name: **HUDSON, DOUGLAS**

Age: 63 YRS DOB: 09/10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 07/26/11 1158

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Pathology Report**FINAL AUTOPSY REPORT**

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

GROSS DESCRIPTION:

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 570 gm (normal male 270-360) and is normal in shape, but increased in size. The pericardium is stained with blood, but smooth in texture. There is a large amount of epicardial fat largely obscuring the coronary arteries. The heart is examined by transverse serial slicing then opening following the flow of blood. Triphenyl tetrazolium chloride (TTC) staining of a section of myocardium does not demonstrate any acute infarct. The remaining myocardium is homogeneous red-brown. The endocardium is normal. The left ventricular wall measures 1.2 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.5 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps are white, delicate and membranous.

Valve circumferences measured on the fresh heart are: tricuspid valve 12.5 cm (normal 12-13 cm), pulmonic valve 10.5 cm (normal 8.5-9.0 cm), mitral valve 12.4 cm (normal 10.5-11.0 cm), and aortic valve 9.2 cm (normal 7.7-8.0 cm). The foramen ovale is closed.

Blood vessels: The calcified coronary arteries are removed from the heart and decalcified prior to examination. The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending. The coronary arteries were removed for further examination. Sectioning reveals maximal stenosis of approximately 75% in each of the left anterior descending, right coronary and left circumflex arteries by plaque. No acute plaque changes are seen.

The aorta exhibits approximately 10% surface area involvement with plaques and mild ulceration located in the abdominal portion of the aorta below the renal arteries. The celiac, superior and inferior mesenteric, and renal arteries are normal. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is normal, and the vocal cords are normal. The tracheal mucosa is normal.

Lungs: The right lung weighs 950 gm (normal male 435), and the left 990 gm (normal male 385). The pleural surfaces show anthracotic changes bilaterally and are otherwise smooth and red. Both lungs are enlarged and congested. The left lung is inflated with formalin before sectioning. The bronchial trees are hyperemic. The vascular trees are normal. The hilar nodes are normal. The lung parenchyma is dark red and smooth with fine porosity.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal. The esophagus is firmly anchored to the diaphragm.

Patient Name: **HUDSON, DOUGLAS**Patient Location: **AUTOPSY**Room/Bed: **-**Printed Date / Time: **10/06/11 - 0724**

Patient Account: 20005972-517

Med. Rec. No.: (0150)848436Q

Patient Name: HUDSON, DOUGLAS

Age: 63 YRS DOB: 09/10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 07/26/11 1158

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

GROSS DESCRIPTION:

Tongue: The tongue has a finely granular surface with no coating. On sectioning of the tongue there is a small hemorrhage on the right side of the tongue.

Stomach and duodenum: The stomach contains 100 ml of chyme which is black and smooth in consistency. The mucosa is normal except for slight petechial hemorrhages.

The duodenal mucosa is normal.

Pancreas: The pancreas has a normal conformation and is slightly hemorrhagic. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is gray-green and glistening. The gallbladder contains approximately 30 ml of green smooth bile with no stones. The mucosa is smooth and dark green. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1320 gm (normal male 1400-1900). The liver surface is smooth and homogeneous. Glisson's capsule is transparent. The liver is serially sliced to reveal a homogeneous lobular pattern. There is no focal lesion.

Small Bowel: The serosa is smooth and transparent with no adhesions. The bowel is normal throughout. The lumen contains semiliquid material. The mucosa is normal.

Large bowel: The serosa is smooth and transparent with no adhesions. The lumen contains feces. The mucosa contains foci of petechial hemorrhages starting in the ascending colon and going to the transverse colon. The appendix is grossly normal.

The appendix is grossly normal.

Rectum and anus: The rectum and anus are normal.

Reticulo-Endothelial System: Spleen: The spleen weighs 258.1 gm (normal 125-195 gm). It is normal in shape, but increased in size.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Patient Name: HUDSON, DOUGLAS

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/06/11 - 0724

Continued....

Page: 6

Patient Account: 20005972-517

Med. Rec. No.: (0150)848436Q

Patient Name: **HUDSON, DOUGLAS**

Age: 63 YRS DOB: 09/10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 07/26/11 1158

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Pathology Report**FINAL AUTOPSY REPORT**

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00155

GROSS DESCRIPTION:

Bone marrow: The thoracic and lumbar spine marrow is grossly normal. The trabeculae and cortical bone are normal density.

GENITO-URINARY SYSTEM: Kidneys: The kidneys are symmetric. The right kidney weighs 228 gm and the left 250 gm (normal male 125-170 gm). The capsules strip with ease to reveal a red smooth cortical surfaces. Serial slicing reveals well demarcated cortico-medullary junctions. The cortices are 0.9 cm thick on the right and the cortices range from 0.5 to 1.2 cm on the left, on the right the medullas 1.4 cm thick and on the left the medullae measures 0.9 cm. The pelvis and calyces are normal. The renal pelvic mucosa is normal. Perihilar adipose tissue is increased.

Ureters: The ureters are normal throughout their length, measuring 0.3 cm in maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is normal. The trigone is normal.

Prostate: The prostate is normal in size, color, consistency, and texture. Serial slicing reveals normal granular surfaces without distinct architecture. The seminal vesicles are normal.

Testes: The right testis weighs 22 gm, and the left 27.6 gm (normal 20-25 gm). The tunica albuginea are tan-white, smooth and glistening. The cut surfaces are soft and tan-yellow, with tubules which string with ease.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 28.6 gm (normal 10-22 gm), and is red-brown, bosselated and glistening. The cut surface is homogeneous, translucent, red-brown.

Parathyroids: Two parathyroids on the left side were taken for specimen section they were too small to be weighed.

Adrenal glands: The right adrenal gland weighs 10.3 gm and the left 10.1 gm (normal 5-6 gm). The adrenal glands have a normal conformation and position.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1500 gm (normal male 1200-1400). The sulci appear to be obliterated which goes with cerebral edema, the gyri are normal. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, unci or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later

Patient Name: **HUDSON, DOUGLAS**Patient Location: **AUTOPSY**Room/Bed: **-**Printed Date / Time: **10/06/11 - 0724**

Continued....

Patient Account: 20005972-517
Med. Rec. No.: (0150)648436Q
Patient Name: **HUDSON, DOUGLAS**
Age: 63 YRS DOB: 09/10/48 Sex: M Race: C
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 07/26/11 1158
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

GROSS DESCRIPTION:

examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Blood samples were taken for toxicology. Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

JTK/da
07/29/11

Patient Name: **HUDSON, DOUGLAS**
Patient Location: **AUTOPSY**
Room/Bed: -
Printed Date / Time: 10/06/11 - 0724

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)848436Q
 Patient Name: **HUDSON, DOUGLAS**
 Age: 63 YRS DOB: 09/10/48 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

MICROSCOPIC DESCRIPTION:

All slides H and E unless stated otherwise. (Autolysis) after a diagnosis means post mortem decomposition affected the assessment

SKIN, FOOT, slide 1: small hemorrhage in deep dermis; no inflammatory reaction observed

PSOAS MUSCLE, slide 2: Two hypercontracted fibers but none with total loss of cross-striation or overt necrosis; Dr. Gerald Campbell of the University of Texas Medical Branch Department of Pathology was consulted for this slide

RIGHT CORONARY ARTERY, slide 3: atherosclerosis with 75% stenosis of the lumen; minimal foam cells seen; no evidence of thrombosis or hemorrhage

LEFT ANTERIOR DESCENDING ARTERY, slide 4: atherosclerosis with 75% stenosis of the lumen; no evidence of thrombosis or hemorrhage

LEFT CIRCUMFLEX CORONARY ARTERY, slide 5: atherosclerosis with 75% stenosis of the lumen; diffuse concentric thickening; no evidence of thrombosis or hemorrhage

TISSUE SUBMITTED AS PARATHYROID GLAND, slide 6: no parathyroid identified

THYROID, slide 7: No pathologic change

ADRENAL, slide 8: No pathologic change

PANCREAS, slide 9: No pathologic change (autolysis)

TESTIS, slide 10: Active spermatogenesis; No pathologic change

PROSTATE, slide 11: Concretions seen in the lumen of glands; multifocal areas of lymphocytic infiltration consistent with chronic prostatitis

SPLEEN, slide 12: Congestion; no evidence of "septic splenitis"

COLON, slides 13-14: Focal area of lamina propria hemorrhage without inflammation

LIVER, slide 15: Mixed macro/microvesicular steatosis; no evidence of inflammation or tumor

LUNGS slides 16,29 (right); slides 18, 30 (left) (4 H&E, 1 GRAM): Very focal areas of early bronchopneumonia seen in 2 out of a total of 10 random sections of lung. No bacteria are seen on gram stain of slide 16. Uninvolved areas of

Patient Name: **HUDSON, DOUGLAS**
 Patient Location: **AUTOPSY**
 Room/Bed: -
 Printed Date / Time: 10/06/11 - 0724

Continued....

Patient Account: 20005972-517
 Med. Rec. No.: (0150)848436Q
 Patient Name: **HUDSON, DOUGLAS**
 Age: 63 YRS DOB: 09/10/48 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00155

MICROSCOPIC DESCRIPTION:

lung show only congestion.

BRONCHUS, slide 17: Submucosal hemorrhage; no inflammation seen

KIDNEY, right, slide 19 and left slide 20: granular casts within some tubules, consistent with acute tubular necrosis

JEJUNUM, slide 21: No pathologic change

HEART, left, anterior, slide 22: perivascular fibrosis; congestion; no evidence of acute myocardial injury; (autolysis)

HEART, interventricular septum, slide 23: Subendocardial fibrosis; no evidence of acute myocardial injury

HEART, left, posterior, slide 24: multifocal areas of interstitial fibrosis; no evidence of acute myocardial injury

HEART, left ventricle, lateral, slide 25: perivascular fibrosis; no evidence of acute myocardial injury

HEART, right ventricle, slide 26: myocyte hypertrophy; no evidence of acute myocardial injury

VERTEBRA, slide 27: No pathologic change; normal cellularity; all cell lines show normal maturation and number

TONGUE, slide 28: Submucosal hemorrhage; no inflammatory reaction seen

POST-MORTEM TESTS:

Vitreous fluid
 Electrolytes (performed at UTMB labs)
 Sodium 138 mmol/L
 Potassium 12.9 mmol/L
 Chloride 113 mmol/L
 Urea nitrogen 12 mg/dL
 Creatinine 1.3 mg/dL
 Osmolality 306 mos/kg

Toxicology (Performed at Aegis Sciences Corp): Pending at time of this report. Results will be reported separately.

Patient Name: **HUDSON, DOUGLAS**
 Patient Location: **AUTOPSY**
 Room/Bed: -
 Printed Date / Time: 10/06/11 - 0724

Continued....

Page: 10

Patient Account: 20005972-517
Med. Rec. No.: (0150)848436Q
Patient Name: **HUDSON, DOUGLAS**
Age: 63 yrs DOB: 09/10/48 Sex: M Race: C
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Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

MICROSCOPIC DESCRIPTION:

JTK/da
09/12/11

Patient Name: **HUDSON, DOUGLAS**
Patient Location: **AUTOPSY**
Room/Bed: -
Printed Date / Time: 10/06/11 - 0724

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)848436Q
 Patient Name: **HUDSON, DOUGLAS**
 Age: 63 YRS DOB: 09/10/48 Sex: M Race: C
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00155

CLINICOPATHOLOGIC CORRELATION:

This patient was a 62 year old male TDCJ inmate who expired in the hospital less than 24 hours after suffering a cardiopulmonary arrest with documented elevated body temperature reading of 105 degrees Fahrenheit. During his brief hospitalization, he developed coagulopathy, acute renal failure, elevated cardiac enzymes, and pulmonary infiltrates. Clinical considerations were pneumonia/sepsis vs. heat stroke.

At autopsy, there were a number of findings characteristic (but not diagnostic of) heat stroke. Multifocal hemorrhages in skin, lung, lamina propria of bowel and bronchi, and tongue correlate with the coagulopathy. The kidneys showed findings consistent with acute tubular necrosis. The brain showed extensive acute ischemic changes and edema, the result of anoxic brain injury from the cardiac arrest. Post-mortem toxicology results are pending at the time of this report and will be reported separately. Analysis of electrolytes from vitreous humor post-mortem did not reveal a dehydration pattern, but this is probably because he received fluids during his hospital treatment.

The lungs showed very focal, microscopic areas of acute bronchopneumonia, which we view as a complication of his arrest and intubation, rather than the cause of his hyperthermia and multi-organ failure.

In this case, the clinical course of elevated temperature, documented high environmental temperatures, clinical features (tachycardia, coagulopathy, renal failure, and coagulopathy) in the absence of any significant infection all support the diagnosis of environmental hyperthermia (heat stroke). It should be noted that the patient was taking amitriptyline which is a medication known to interfere with heat dissipation mechanisms.

Additional autopsy findings include an enlarged and hypertrophic heart (weight = 570 grams) and coronary artery disease. The left anterior descending, right coronary and left circumflex arteries all showed atherosclerosis with approximately 75% luminal obstruction. However, there was no evidence of acute myocardial injury, only some old areas of fibrosis. This fibrosis is not surprising given the patient's long history of coronary artery disease. Incidental findings include mild thyromegaly (weight = 28 grams), colonic diverticulosis, apical lung pleural fibrosis, and a fatty liver.

In summary, it is our opinion that the cause of death is environmental hyperthermia (heat stroke). Contributory factors include atherosclerotic cardiovascular disease, and treatment with amitriptyline. The manner of death is accident.

JTK/da

Patient Name: **HUDSON, DOUGLAS**
 Patient Location: **AUTOPSY**
 Room/Bed: -
 Printed Date / Time: 10/06/11 - 0724

Continued....

Page: 12

Patient Account: 20005972-517

Med. Rec. No.: (0150)848436Q

Patient Name: **HUDSON, DOUGLAS**

Age: 63 YRS DOB: 09/10/48 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00155

CLINICOPATHOLOGIC CORRELATION:

09/12/11

JUDITH F. ARONSON, M.D., PATHOLOGIST

(Electronic Signature)

10/05/11

Patient Name: **HUDSON, DOUGLAS**

Patient Location: **AUTOPSY**

Room/Bed: -

Printed Date / Time: 10/06/11 - 0724

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END OF REPORT

Exhibit M

Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 yrs DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

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Pathology Report

1517660

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNKNOWN Residence: TEXAS
 Date/Time of Death: 8/20/2011 10:29 Date/Time of Autopsy: 8/25/2011
 Pathologist/Resident: STOUT/KOSHY Service: TDC CONTRACT
 Restriction: NONE

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body as a whole: Sudden death of uncertain cause, but consistent with environmental hyperthermia (postmortem axillary temperature of 105.2 F, simultaneous environmental temperature of 91 F) C1,2

II. Cardiovascular system:
 A. Coronary arteries: No significant abnormalities identified A5
 B. Heart, myocardium: No significant abnormalities identified A5

III. Lungs, bilateral: No thromboemboli identified A5

IV. Other findings:
 A. Body as a whole: No evidence of infection identified A5
 B. Body as a whole: Seropositive for HIV under treatment A5
 C. Body as a whole: No evidence of significant acute injury is identified A5

COMMENT #1: Advanced decomposition of the body compromised the assessment

COMMENT #2: The cause of death is judged to be environmental hyperthermia, and the manner of death is judged to be accidental.

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***TYPE: Anatomic(A) or Clinical(C) Diagnosis.

IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/06/11 - 1304

Continued....

Page: 1

Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

CLINICAL SUMMARY:

The patient was a 44 year old Hispanic male TDCJ inmate with a past medical history of HIV under treatment and schizophrenia who was found unresponsive in his cell at 0920 on 8-20-11. The patient was taken to the infirmary where he was found to have dilated fixed pupils, no pulse and no respirations, and cardiopulmonary resuscitation was started. His skin was noted to be hot. Axillary body temperature taken at 0928 showed a reading of 105.2 degrees Fahrenheit. Ice packs were placed under his arms and on his back and legs. Emergency Medical Services arrived and transported the patient to Palestine Regional Medical Center where he was pronounced dead at 1029 on 8-20-11. A complete autopsy was done on 8-25-11 at the University of Texas Medical Branch.

JTK/da
08/29/11

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/06/11 - 1304

Continued....

Page: 2

Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

GROSS DESCRIPTION:

EXTERNAL EXAMINATION: The decedent, identified by left ankle ID as "Daniel Alvarado", is a well developed, lean Hispanic male TDCJ inmate, measuring 67 inches in length, and weighing 156 lbs. according to TDCJ records on 7/19/11. The general appearance is consistent with the reported age of 44 years. Accompanying the body are a pair of white boxer shorts and white t-shirt. Rigor mortis is present in the arms and legs. The head is normocephalic with 0.5 cm of brown hair and prominent frontal balding. There is marked lividity of the head, face, anterior neck and shoulders, with marked marbling of the neck and shoulders which extends down the upper arms changing color from purple to bluish green. The entire back and sides down to the buttocks have extensive purple marbling. The abdomen has marked greenish staining over both sides that extends up to the axilla on the right, and also involves the center of the sternum. Similar areas are seen focally over the anterior surface of the right thigh and lower leg. There are several hypopigmented skin lesions on the abdomen, the largest of which measures 0.5 x 0.3 cm.

The irides are brown in color with equal pupils measuring 0.3 cm in diameter. The corneas are cloudy, the conjunctivae are pale, and the sclerae are white. The nares are patent with no exudate. Dentition is normal. Buccal membranes are normal. The trachea is midline. Palpation of the neck reveals no lymphadenopathy or thyromegaly.

Body hair distribution is normal male with sparse hair over the lower legs. The chest diameters are normally proportioned. The abdomen is slightly protuberant. Lymph nodes in the suprACLAVICULAR, axillary and inguinal regions are not palpable. The genitalia are normal male circumcised.

The following evidence of medical intervention is present:

1. An endotracheal tube in place along with a blue and white collar
2. EKG leads on the left upper chest (one is right next to the left nipple and the other two are 4 cm below the first one). There is an EKG lead on the left lateral upper arm, the right lateral upper arm, and the left lower quadrant of the abdomen.
3. There is an IV line in the right lower arm
4. There is an IV line in the left antecubital fossa

INTERNAL EXAMINATION: The body is opened using a standard Y shaped incision, to reveal a 3 cm thick panniculus and the thoracic and abdominal organs in the normal anatomic positions. There is greenish black discoloration of the muscles of the anterior neck and the right costal margin. There are fibrous adhesions from the right upper lobe of the lung to the chest wall. The left and right pleural cavities contain no fluid. The pleural surfaces have marked anthracotic deposits. The anterior surfaces of the heart and lungs have a peculiar grayish pink tinge that may represent decomposition

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/06/11 - 1304

Continued....

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Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

Copies to:

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(409) 772-1238

Fax (409) 772-5693

Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

GROSS DESCRIPTION:

The pericardial sac contains 10 ml of clear orange fluid.

No rib fractures are noted.

The thymus is largely replaced by fat. No thromboemboli are found in the large pulmonary arteries.

The abdominal cavity contains no fluid. There are no adhesions. The colon is dark brown in color except for the sigmoid which appears normal.

CARDIOVASCULAR SYSTEM: Heart: The heart weighs 290 gm (normal male 270-360), shape and size are normal. The pericardium is normal. The heart is examined by transverse serial slicing; opening following the flow of blood. The remaining myocardium is without lesions. The endocardium is markedly hemolysed. The left ventricular wall is 1.4 cm thick (normal 1.0-1.8 cm) at the junction of the posterior papillary muscle and free wall, and the right ventricle is 0.4 cm thick (normal 0.25-0.3 cm) 2 cm below the pulmonic valve annulus, anteriorly. The valve leaflets and cusps have only age related changes.

Valve circumferences measured on the fresh heart are: tricuspid valve 12 cm (normal 12-13 cm), pulmonic valve 8.2 cm (normal 8.5-9.0 cm), mitral valve 11 cm (normal 10.5-11.0 cm), and aortic valve 8.5 cm (normal 7.7-8.0 cm). The foramen ovale is closed. The heart is very decomposed, collapsing into an almost flat soft mass when placed on the table.

Blood vessels: The coronary circulation is right dominant based on the origin of the posterior descending artery. The apex is supplied by the left anterior descending artery. The coronary arteries are opening longitudinally to reveal minimal atherosclerosis. The aorta exhibits minimal atherosclerosis. The celiac, superior and inferior mesenteric, renal and iliac arteries are normal. The superior and inferior vena cavae and their branches are normal. The portal vein is normal.

RESPIRATORY SYSTEM: Larynx and trachea: The laryngeal mucosa is normal, and the vocal cords are normal. The tracheal mucosa is normal.

Lungs: The right lung weighs 710 gm (normal male 435), and the left 690 gm (normal male 385). The pleural surfaces are smooth with anthracotic pigment bilaterally. The left lung is inflated with formalin before sectioning. The bronchial and vascular trees are normal. The hilar nodes are normal. The lung parenchyma is dark blue and smooth. Both lungs appear to be decomposed, but no other lesions are seen.

GASTROINTESTINAL TRACT: Esophagus: The esophageal mucosa is normal.

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

Room/Bed: -

Printed Date / Time: 10/06/11 - 1304

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Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

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FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

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GROSS DESCRIPTION:

Tongue: The tongue is normal.

Stomach and duodenum: The stomach contains 20 ml of chyme which is dark green. The mucosa is normal.

The duodenal mucosa is normal.

Pancreas: The pancreas is normal. The pancreatic duct is patent.

Biliary tract: The gallbladder serosa is normal. The gallbladder contains 20 ml of green bile with no stones. The mucosa is normal. The cystic duct, hepatic duct, and common duct are normal, and bile is expressed freely from the ampulla on compressing the gallbladder.

Liver: The liver weighs 1550 gm (normal male 1400-1900). The liver is serially sliced to reveal no lesions.

Small Bowel: The bowel is normal throughout. The lumen contains semiliquid material. The mucosa is normal.

Large bowel: The serosa is normal. The lumen contains feces. The mucosa is normal.

The appendix is grossly normal.

Rectum and anus: The rectum is normal. The anus appears to have a small 1 x 1 cm lesion, possibly a condyloma.

Reticulo-Endothelial System: Spleen: The spleen weighs 221 gm (normal 125-195 gm). It is normal.

Lymph nodes: Lymph nodes in the mediastinum, abdomen and retroperitoneum are unremarkable.

Spine: The spine is normal.

Bone marrow: The thoracic and lumbar spine marrow is grossly normal.

GENITO-URINARY SYSTEM: Kidneys: The right kidney weighs 120 gm and the left 150 gm (normal male 125-170 gm). The capsules strip with ease to reveal dark red cortical surfaces without lesions. Serial slicing reveals no lesions. The cortices are 0.5 cm thick; the medullas 1.1 cm thick. The pelvis and calyces appear normal. The renal pelvic mucosa is normal.

Ureters: The ureters are normal throughout their length, measuring 0.3 cm in

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

Room/Bed: -

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Patient Account: 20005972-517
 Med. Rec. No.: (0150)224616N
 Patient Name: ALVARADO, DANIEL
 Age: 44 YRS DOB: 05/22/67 Sex: M Race: S
 Admitting Dr.: OUTSIDE TDCJ
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 Date / Time Admitted: 08/25/11 0754
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Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

GROSS DESCRIPTION:

maximal external diameter. They are probe-patent into the bladder.

Bladder: The bladder is normal.

Prostate: The prostate is normal. Serial slicing reveals no lesions. The seminal vesicles are normal.

Testes: The right testis weighs 25 gm, and the left 23.2 gm (normal 20-25 gm). The cut surfaces reveal no lesions.

ENDOCRINE SYSTEM: Thyroid: The thyroid weighs 16.2 gm (normal 10-22 gm). The cut surfaces have no lesions.

Parathyroids: Two very small pieces of tissue were collected for sectioning as possible parathyroids.

Adrenal glands: The right adrenal gland weighs 4.8 gm and the left 7.6 gm (normal 5-6 gm). Serial slices in the transverse plane reveal no lesions.

BRAIN AND SPINAL CORD: The scalp, calvarium, base of the skull and dura mater are normal. The brain weighs 1530 gm (normal male 1200-1400). The gyri and sulci display a normal pattern without edema. The circle of Willis, basilar and vertebral arteries show no atherosclerosis. No indentation/herniation of the cingulate gyri, unci or molding of the cerebellar tonsils are noted. The brain is fixed in formalin for later examination by a neuropathologist (see neuropathology report).

SPINAL CORD: The grossly normal spinal cord is fixed in formalin for later examination by a neuropathologist.

PITUITARY GLAND: The grossly normal pituitary gland is fixed in formalin for subsequent examination by a neuropathologist.

Comment: All of the organs appeared to have varying degrees of decomposition.

Blood and vitreous samples were taken for toxicology and hydration status respectively. Samples of liver, kidney, heart, lung, and spleen, were frozen for potential further examination.

JTK/da
 08/30/11

Patient Name: ALVARADO, DANIEL
 Patient Location: AUTOPSY
 Room/Bed: -
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Continued....

Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted: 08/25/11 0754

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

MICROSCOPIC DESCRIPTION:

- All slides are stained with H&E unless otherwise stated
- NPC = No pathologic change
- (Autolysis) after a diagnosis means that post mortem decomposition compromised the assessment

VERTEBRA, slide 1: Bony trabeculae appear normal. Overall marrow cellularity is about 60%; ME ratio is about 3 to 1; all elements have normal maturation (autolysis)

RIGHT LUNG, slide 2: Focal necrosis without reaction around bronchioles consistent with agonal aspiration or post mortem aspiration. These areas also contain bacterial colonies (autolysis)

ADRENAL, LEFT, slide 3: Probably no pathologic change (autolysis)

TESTIS, LEFT, slide 4: No pathologic change

SKIN, PERIANAL, slide 5: No pathologic change

PANCREAS, slide 5: No pathologic change (autolysis)

SKELETAL MUSCLE, PSOAS, slide 6: Probably no pathologic change (autolysis and bacterial overgrowth). No evidence of rhabdomyolysis identified.

PARATHYROID, slide 7: Two lymph nodes with no pathologic change. No parathyroids seen.

THYROID, slide 7: Cannot assess due to peculiar change apparently due to post mortem bacterial overgrowth.

PROSTATE, slide 9: Probably no pathologic change (autolysis)

LIVER, slide 10: Cannot assess due to autolysis.

KIDNEY, RIGHT, slide 11: Cannot assess due to autolysis and post mortem bacterial overgrowth.

SPLEEN, slide 12: Cannot assess due to autolysis

HEART, LEFT, slide 13: Cannot assess due to autolysis and post mortem bacterial overgrowth.

JEJUNUM, slide 14: Probably no pathologic change (autolysis)

COLON, slide 15: Cannot assess due to autolysis

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Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

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Date / Time Admitted: 08/25/11 0754

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-11-00179

MICROSCOPIC DESCRIPTION:

Toxicologic studies of blood were positive for Nortriptyline only, 294 ng/mL, which is in the therapeutic range.

Studies of vitreous fluid were unreliable because of postmortem decomposition (potassium level >14.0 MMOL/L).

LCS/da
09/23/11

Patient Name: ALVARADO, DANIEL

Patient Location: AUTOPSY

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Patient Account: 20005972-517

Med. Rec. No.: (0150)224516N

Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

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Date / Time Admitted: 08/25/11 0754

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Pathology Report

NEUROPATHOLOGY CONSULTATION

Neuropath Office (409)772-2881

Autopsy No.: AU-11-00179

CLINICAL HISTORY:

The patient was a 44 year old Hispanic male TDCJ inmate with a past medical history of HIV and schizophrenia who was found unresponsive in his cell at 0920 on 8-20-11. The patient was taken to the hospital infirmary where he was found to have no pulse and no respirations and cardiopulmonary resuscitation was started. His skin was noted to be hot. Axillary body temperature taken at 0928 showed a reading of 105.2 degrees Fahrenheit. Ice packs were placed under his arms and on his back and legs. Emergency Medical Services arrived and transported the patient to Palestine Regional Medical Center where he was pronounced dead at 1029 on 8-20-11. A complete autopsy was done on 8-25-11 at the University of Texas Medical Branch.

PATHOLOGIST/RESIDENT: STOUT/KOSHY

GROSS DESCRIPTION:

Submitted for neuropathologic examination are brain (unfixed weight 1530 g), convexity dura, spinal cord with spinal dura (length 26.5 cm, conus medullaris and filum terminale present), and pituitary gland.

The dura is grossly unremarkable. There is no evidence of significant jaundice staining. There is no evidence of acute hemorrhages, subdural membranes, or masses. There is no evidence of thrombosis of the superior sagittal sinus.

External examination reveals the brain to be intact and normally developed with mild fibrous opacification of the convexity leptomeninges. There is no evidence of arachnoid hemorrhage, exudate, focal softening, discoloration, atrophy, or swelling. There is subjective fullness of the cerebellar tonsils, but no brainstem compression or uncal herniation. The major cerebral arteries have no significant atherosclerosis. The circle of Willis has a normal pattern, and no aneurysms or other malformations are identified.

The cerebral hemispheres are sliced coronally, revealing normal anatomic development and mildly dilated cerebral ventricles. The cortical ribbon is normal in thickness and appearance. The cerebral white matter is normally myelinated, but deep white and gray structures are poorly fixed. The gray-white junction is, however, distinct throughout. No focal lesions are identified in the hemispheres.

The brainstem and cerebellum are separated through the cerebellar peduncles, and the cerebellum is sliced sagittally and the brainstem transversely. Both structures are normally developed, and have normal pigmentation of substantia nigra and locus ceruleus. There is no evidence of gross lesions in these structures.

The spinal dura is opened anteriorly, revealing no evidence of extradural, subdural or arachnoid hemorrhage. The spinal cord is sliced transversely at

Patient Name:

Patient Location:

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Printed Date / Time: ALVARADO, DANIEL
AUTOPSY

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Patient Account: 20005972-517

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Patient Name: ALVARADO, DANIEL

Age: 44 YRS DOB: 05/22/67 Sex: M Race: S

Admitting Dr.: OUTSIDE TDCJ

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Pathology Report

NEUROPATHOLOGY CONSULTATION

Neuropath Office (409)772-2881

Autopsy No.: AU-11-00179

GROSS DESCRIPTION:

0.5 to 1 cm intervals, revealing normal development and no evidence of focal lesions. However, the entire cord is dusky in color and softer than usual for fixed CNS tissue, suggestive of advanced autolysis.

The pituitary gland is intact and normally developed, without external hemorrhages or other lesions. The horizontal cut surface reveals normal anterior and posterior lobes, and no evidence of internal lesions.

Photographs made during gross brain examination: none.

DICTATED BY: GERALD A. CAMPBELL, M.D., PATHOLOGIST
09/08/11

SECTIONS TAKEN:

B1: Pituitary gland; B2: Right frontal, area 8; B3: Right hippocampus; B4: Left basal ganglia; B5: Right cerebellum; B6: Spinal cord.

FINAL DIAGNOSES:**A. Brain and cranial dura (weight 1530 g):**

1. Leptomeninges, convexity: Mild diffuse fibrosis
2. Brain: Mild acute ischemic change and edema (weight, delayed fixation of internal structures, expansion of cerebellar tonsils, microscopic ischemic changes and vacuolation)

B. Spinal cord and spinal dura (28.5 cm caudal segment):

1. Spinal cord: Advanced autolytic changes (dusky coloration and softening) unusual for post-mortem autolysis

C. Pituitary gland: No abnormalities**COMMENTS:**

The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409) 772-2858.

Patient Name:

Patient Location:

Room/Bed:

Printed Date / Time:

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ALVARADO, DANIEL

Patient Account: 20005972-517
Med. Rec. No.: (0150)224516N
Patient Name: ALVARADO, DANIEL
Age: 44 YRS DOB: 05/22/67 Sex: M Race: S
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/25/11 0754
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Gross: 09/08/11
Final: 09/16/11

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Pathology Report

GERALD A. CAMPBELL, M.D., PATHOLOGIST
Division of Neuropathology
(Electronic Signature).

Patient Name:
Patient Location:
Room/Bed:
Printed Date / TIME: ALVARADO, DANIEL
AUTOPSY
Page:

Patient Account: 20005972-517
Med. Rec. No.: (0150)224516N
Patient Name: **ALVARADO, DANIEL**
Age: 44 YRS DOB: 05/22/67 Sex: M Race: S
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-11-00179

CLINICOPATHOLOGIC CORRELATION:

The diagnosis of environmental hyperthermia was based on the postmortem axillary temperature of 105.2 F, and the lack of any other cause of death despite a complete autopsy and blood toxicologic studies.

LCS/LCS
10/05/11

L. CLARKE STOUT, M.D., PATHOLOGIST
L. CLARKE STOUT, M.D., PATHOLOGIST
10/06/11

(Electronic Signature)

Patient Name: **ALVARADO, DANIEL**
Patient Location: **AUTOPSY**
Room/Bed: -
Printed Date / Time: 10/06/11 - 1304

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Exhibit N

Patient Account: 20005972-517
 Med. Rec. No.: (0150)1797921
 Patient Name: ADAMS, RODNEY GERALD
 Age: 45 YRS DOB: 10/02/66 Sex: M Race: C
 Admitting Dr.: OUTSIDE TDCJ
 Attending Dr.: OUTSIDE TDCJ
 Date / Time Admitted : 08/06/12 1413
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 Pathology Report

1797921

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-12-00167

AUTOPSY INFORMATION:

Occupation: INMATE Birthplace: UNK Residence: TEXAS
 Date/Time of Death: 8/4/12 17:50 Date/Time of Autopsy: 8/8/12
 Pathologist/Resident: WALKER/VAN DELLEN Service: TDC CONTRACT
 Restriction: NONE

 The on-line version of the final autopsy report is abbreviated. If you would like a copy of the complete final report, or if you have any questions regarding this report, please contact the Autopsy Division Office, (409)772-2858.

FINAL AUTOPSY DIAGNOSIS

I. Body As a Whole: Clinical history of hyperthermia (107 degrees Fahrenheit), hypotension, and coagulopathy consistent with DIC	C2
A. Brain: Diffuse cerebral edema with mild tonsillar herniation	A4
B. Lungs, bilateral: Edema and congestion (left lung = 940g, right lung = 840 g)	A4
1. Diffuse petechiae of the visceral pleura	A4
C. Lung, left: Early bronchopneumonia; focal chronic interstitial pneumonia	A3
D. Spleen: Geographic necrosis	A4
E. Kidneys, bilateral: Scattered cortical petechiae; no thrombi detected	A4
F. Mediastinum: Soft tissue hemorrhage	A4
G. Aorta, suprarenal: Patchy areas of adventitial hemorrhage	A4
H. Colon: 1L dark, red stool	A4
1. Patchy areas of mucosal petechiae and congestion	A4
II. Other Findings:	
A. Kidney, left: Simple cyst in the upper pole, 1.5 x 1.5 cm, with clear, yellow fluid	A5
B. Bladder: Muscular hypertrophy; patchy areas of mucosal congestion	A3
E. Liver: Mild steatosis	A5

RECEIVED

REF ID: 00000000000000000000000000000000

RECORDED AND SENT

***TYPE: Anatomic(A) or Clinical(C) Diagnosis.
 IMPORTANCE: 1-immediate cause of death (COD); 2-underlying COD;
 3-contributory COD; 4-concomitant, significant; 5-incidental ***

Patient Name: ADAMS, RODNEY GERALD
 Patient Location: AUTOPSY
 Room/Bed: -
 Printed Date / Time: 09/14/12 - 1007

Patient Account: 20005972-517
Med. Rec. No.: (0150)1797921
Patient Name: ADAMS, RODNEY GERALD
Age: 45 YRS DOB: 10/02/66 Sex: M Race: C
Admitting Dr.: OUTSIDE TDCJ
Attending Dr.: OUTSIDE TDCJ
Date / Time Admitted: 08/06/12 1413
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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409) 772-2858

Autopsy No.: AU-12-00167

CLINICAL SUMMARY:

The decedent was a 46 year old white male, incarcerated at TDCJ, and in a holding barracks with 54 other inmates, awaiting transfer to the state penitentiary. On August 3rd, 2012, he was found by a security guard to be having a seizure, and was transported to Palestine Regional Medical Center. He presented to the emergency department unresponsive with a temperature of 107 degrees Fahrenheit, severe hypotension, and coagulopathy consistent with disseminated intravascular coagulation (DIC). He was transferred to East Texas Medical Center the same day, at 2352 hours, and in addition to the findings above, was noted to have metabolic acidosis and creatine kinase level of 1320 IU/L (normal 60 and 400 IU/L). As he remained unresponsive and in refractory shock, it was determined that further resuscitative efforts were futile. Given his poor prognosis, and with the consent of his mother, mechanical ventilation and pressor therapy were withheld. He was pronounced dead on August 4th, 2012 at 1750 hours, and a complete autopsy was performed on August 8th, 2012. The outside temperature of the holding cell taken at the time of the inciting event on August 3rd, 2012 was recorded to be 102 degrees Fahrenheit, with a humidity of 38%, and the ambient temperature was 91.6 degrees Fahrenheit. Based on the autopsy findings, it is our opinion that the cause of death was hyperthermia resulting in fulminant DIC and hypotensive shock. The manner of death is natural.

MVD/TW
09/06/12

Patient Name: ADAMS, RODNEY GERALD
Patient Location: AUTOPSY

Room/Bed: -
Printed Date / Time: 09/14/12 - 1007

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Patient Account: 20005972-517

Med. Rec. No.: (0150)1797921

Patient Name: ADAMS, RODNEY GERALD

Age: 45 YRS DOB: 10/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

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Date / Time Admitted : 08/06/12 1413

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Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-12-00167

GROSS DESCRIPTION:

I. CLOTHING AND PERSONAL EFFECTS: None

II. THERAPEUTIC INTERVENTION:

- Endotracheal tube
- Nasogastric tube
- Left antecubital fossa area: catheter
- Dorsum of right hand: intravenous catheter
- Left 2nd digit: pulse oximeter
- Right femoral area: triple lumen catheter
- Rectum: Flexi-Seal catheter

III. EXTERNAL EXAMINATION

The body, identified by name on the right wrist band, right ankle band, and right toe tag, is that of a well-nourished adult 46 year-old Caucasian male, with a body length of 167 cm. Rigor mortis is present in all four extremities. The skin is white and intact, with red/pink and slightly blanchable lividity present in the forehead, anterior and posterior neck, and posterior thorax. Short, reddish/brown hair is present on the supraorbital ridge, anterior thorax, abdomen, and pubic area, and similarly-colored hair stubble on the scalp and chin. The sternal area is shaven, with four surrounding electrocardiogram pads. The calvarium is symmetric and intact to palpation, and the scalp is intact. The corneae are clear, the sclerae are white, and the conjunctivae are injected. There is hemorrhage of the sclera in the lateral corner of the right eye. The irides are blue, and the pupils are 0.4 cm bilaterally. Dentition is fair. The penis is circumcised, and the testicles are descended.

The following marks and scars are present:

- Left periorbital ecchymosis, spanning 2.5 cm inferiorly and 1.5 cm superiorly, measured from the lateral canthus
- Right anterior neck: 10.5 cm linear scar
- Right deltoid: tattoo of skull with the name "Harley Davidson"
- Right deltoid: puncture wound with surrounding ecchymosis
- Left anterior upper extremity: 5 cm area of scattered petechiae and ecchymosis
- Right posterior forearm: puncture wound
- Left posterior forearm: puncture wound with surrounding ecchymosis
- Right antecubital fossa: puncture wound with surrounding ecchymosis
- Left antecubital fossa: puncture wound with surrounding ecchymosis
- Sternal area: 8 cm x 5 cm area of patchy ecchymosis
- Right inguinal area: 4 cm x 3.2 cm and 1 cm x 1 cm dry, yellow scabs
- Right anteromedial thigh: 2 cm x 2 cm dry, yellow, scab
- Left inguinal area: 3 puncture wounds with surrounding dried blood and ecchymosis
- Left anteromedial thigh: 4 cm x 5 cm dry, yellow scab

Patient Name: ADAMS, RODNEY GERALD

Patient Location: AUTOPSY

Room/Bed:

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Patient Account: 20005972-517

Med. Rec. No.: (0150)1797921

Patient Name: ADAMS, RODNEY GERALD

Age: 45 YRS DOB: 10/02/66 Sex: M Race: C

Admitting Dr.: OUTSIDE TDCJ

Attending Dr.: OUTSIDE TDCJ

Date / Time Admitted : 08/06/12 1413

Copies to :

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University of Texas Medical Branch

Galveston, Texas 77555-0543

(409) 772-1238

Fax (409) 772-5683

Pathology Report

FINAL AUTOPSY REPORT

Autopsy Office (409)772-2858

Autopsy No.: AU-12-00167

GROSS DESCRIPTION:

- Left anterior leg: 2 blue punctate scars, 1 punctate scab, 1 scab measuring 1 cm x 0.5 cm
- Right anteromedial leg: 2 linear scabs measuring 0.5 cm each

IV. INTERNAL EXAMINATION

The body is opened using a Y-shaped incision to reveal a 5.0 cm panniculus and the thoracic organs in the correct anatomic positions. There is mediastinal soft tissue hemorrhage.

SEROUS CAVITIES: The pericardial space contains 48 mL of clear, red fluid. The right and left pleural spaces contain 100 mL and 150 mL clear, red fluid, respectively. The peritoneal space contains 50 mL clear, red fluid.

CARDIOVASCULAR SYSTEM: The heart weighs 352 g (normal 270-360 g). The left ventricular wall is 1.5 cm (normal 1.0-1.8 cm) in thickness at the junction of the posterior papillary muscle and free wall, with concentric hypertrophy. The right ventricle is 0.2 cm (normal 0.25-0.3 cm) thick, measured 2 cm below the pulmonic valve annulus, anteriorly. The cardiac valves are unremarkable. Valve circumferences measured on the fresh heart are: tricuspid valve 10.4 cm (normal 12-13 cm), mitral valve 10.2 cm (normal 10.5-11.5 cm), aortic valve 7.4 cm (normal 7.7 cm-8 cm), pulmonic valve 8.0 cm (normal 8.5-9 cm). There are no acute ischemic cardiac lesions identified. The endocardium is smooth, and the majority of the anterior surface of the heart is covered with epicardial fat.

The coronary arteries are dissected longitudinally, and no significant stenosis is observed. The posterior circulation is right dominant. The thoracic and abdominal aorta and major branches are intact. There is no embolus or thrombus observed in the pulmonary artery. There are moderate fatty streaks of the suprarenal aorta as well as patchy areas of adventitial hemorrhage, and moderate atherosclerotic plaques of the infrarenal aorta. The celiac, superior and inferior mesenteric, renal, and iliac arteries are normal. The superior and inferior vena cavae and portal vein are normal.

RESPIRATORY SYSTEM: The neck presents an intact hyoid bone as well as thyroid and cricoid cartilages. The larynx is composed of unremarkable vocal cords and folds, appearing widely patent without foreign material, and is lined by smooth, glistening membrane. The epiglottis is a characteristic plate-like structure, and grossly unremarkable. Both the musculature and the vasculature of the anterior neck are unremarkable. The trachea is in the midline, and its mucosa is mildly congested. The right lung weighs 850 g and the left 940 g. There are diffuse bilateral petechiae in the visceral pleura. Both lungs appear edematous with patchy areas of congestion.

GASTROINTESTINAL SYSTEM: The tongue has a finely granular surface and is

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GROSS DESCRIPTION:

unremarkable. The pharynx and esophagus are intact with diffusely congested mucosa. The stomach is intact and contains approximately 50 mL of dark green fluid, and is grossly unremarkable.

There are patchy areas of mucosal petechiae in the small bowel. The large bowel contains approximately 1 L of dark red stool. There is an area of dark, mottled discoloration in the serosa of the transverse colon. There are patchy areas of mucosal petechiae and congestion in the entire length of large bowel.

The appendix is present and grossly normal.

The surface of the liver is smooth, diffusely tan, and grossly unremarkable. Serial slicing reveals a smooth homogenous parenchyma.

The gallbladder and extrahepatic biliary tree are intact, and the gallbladder contains 35 ml of dark green bile, with an unremarkable mucosa. The cystic and common bile ducts are patent. Cholecystitis or lithiasis are not identified. The structures of the hepatic hilus are intact.

The pancreas has a normal conformation. The parenchyma is slightly autolyzed, tan, and there is patchy fatty infiltration. The major ducts are patent.

GENITOURINARY SYSTEM: The renal cortical surfaces have patchy areas of congestion and scattered petechiae. The capsules strip with ease. The right kidney weighs 180 g and the left 200 g. The right cortex and medulla are 0.6 cm and 1.2 cm, respectively, and the left cortex and medulla are 0.8 cm and 1.4 cm, respectively. There is a 1.5 cm x 1.5 cm simple cyst in the upper pole of the left kidney, which contains clear, yellow fluid. The renal columns of Bertin extend between the well demarcated pyramids and appear unremarkable. The medulla presents normal renal pyramids with unremarkable papillae. No calculi are observed. The renal arteries and veins are unremarkable.

The ureters are of normal caliber lying in their course within the retro-peritoneum and are probe-patent into the urinary bladder. There are patchy areas of congestion in the urinary bladder mucosa, and mild hypertrophy of the bladder wall.

Prostate: The prostate is tan in color, and appears normal in size. Serial slicing reveals a uniformly smooth, tan surface.

Testes: The right and left testes weigh 13.9 g and 15.4 g, respectively (normal 20-25 g). The tunica albuginea are tan/white, smooth and glistening. The cut surfaces are tan/yellow, and the tubules string with ease.

HEMATOPOIETIC SYSTEM: The spleen weighs 180 g (normal 125 - 195 g). The cut surface reveals a dark red parenchyma with multiple patchy areas of pale

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GROSS DESCRIPTION:

discoloration consistent with necrosis.

ENDOCRINE SYSTEM: The thyroid gland weighs 15.5 g (normal 10-22 g), presenting two well-defined lobes with connecting isthmus and a beefy brown cut-surface. There is a 0.5 cm x 1.5 cm tan, circumscribed nodule in the parenchyma. The parathyroids are not identified. Adrenal glands are of normal shape. The right and left adrenal glands weigh 6.6 g and 6.5 g, respectively. Serial sectioning presents no gross lesions.

CENTRAL NERVOUS SYSTEM: The scalp is intact without contusions or lacerations. The calvarium is likewise intact without bony abnormalities or fractures. The brain weighs 1,520 g (normal 1200-1400 g). There is diffuse gyral flattening and mild tonsillar herniation. The brain is fixed in formalin for later examination by a neuropathologist.

SPINAL CORD: The spinal cord is fixed and formalin for later examination by a neuropathologist.

MVD/TW
08/14/12

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Autopsy No.: AU-12-00167

MICROSCOPIC DESCRIPTION:

Note: All slides are stained with H&E unless otherwise specified.
NPC = No Pathologic change (autolysis) after a diagnosis means that post mortem decomposition compromised the assessment

Adrenals, slide 1: NPC

Testes, slide 2: Focal atrophy, otherwise NPC

Thyroid, slide 3: Multinodular, NPC

Lung, left, slide 4: Early bronchopneumonia; focal chronic interstitial pneumonia

Lung, right, slide 5: Congestion; hemosiderin-laden macrophages

Heart, left, slides 6-8: NPC

Heart, right, slide 9: NPC

Kidneys, slide 10: No thrombi detected (autolysis)

Liver, slide 11: Mild steatosis

Spleen, slide 12: Multiple foci of congestion

Duodenum, slide 13: NPC

Colon, slide 14: NPC

Prostate, slide 15: NPC

MVD/TW

09/07/12

Patient Name: ADAMS, RODNEY GERALD

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CLINICOPATHOLOGIC CORRELATION:

Hyperthermia with a core temperature of 104 degrees Fahrenheit or greater can be life threatening, and may occur when the body produces an excessive amount of heat, cannot adequately dissipate heat, such as when exposed to extreme environmental temperatures. As the core temperature increases, there is an increase in metabolic rate and oxygen consumption. Enzymes are affected by changes in temperature, as these proteins require a certain temperature and pH range beyond which they begin to denature. Injury to the cell membrane occurs, and tissues begin to leak potassium into the circulatory system.

Rhabdomyolysis, or destruction of muscle tissue, can cause dangerous electrolyte imbalance, as well as release of myoglobin, which can have deleterious effects on the kidney. Vascular endothelium is particularly sensitive to hyperthermia, and when damaged, there is system activation of the clotting cascade, causing disseminated intravascular coagulopathy (DIC). When this occurs, there is depletion of platelets and other clotting factors in the formation of systemic microthrombi, which can damage delicate microvasculature, such as in the kidney. Multisystem organ failure ultimately occurs, and the decreased mean arterial blood pressure is inadequate to sustain perfusion to vital organs.

MVD/TW
09/06/12

DAVID H. WALKER, M.D., PATHOLOGIST

(Electronic Signature)

09/10/12

Patient Name: ADAMS, RODNEY GERALD

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END OF REPORT